

## Beyond pills: Cardiologists examine alternatives to halt high blood pressure

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More and more, patients show up to appointments with hypertension expert John Bisognano, M.D., Ph.D. carrying bags full of "natural" products that they hope will help lower their blood pressure. And like most physicians, Bisognano doesn't always know if these products will do any good, or if they will cause any harm.

"Right now we're seeing a cultural shift where an increasing number of people want to avoid standard pharmaceuticals," said Bisognano, professor of Medicine and director of Outpatient Cardiology at the University of Rochester Medical Center. "We're also seeing a growing number of patients who require a large number of drugs to control their [blood pressure](#) and are looking for something else to help manage it."

In an effort to better educate [health care professionals](#) and patients, Bisognano and Kevin Woolf, M.D., a cardiology fellow at the Medical Center, conducted the most comprehensive review to date of the evidence behind a wide range of non-drug interventions for the treatment of [high blood pressure](#). The review is featured in the September issue of the *Journal of Clinical Hypertension*.

Woolf said there is not enough data to recommend any of these alternative options on a routine basis, but on an individual basis he thinks they are useful. "Patients have different backgrounds and different approaches to living their lives," said Woolf. "This is where the art of medicine comes in; getting to know patients and what they will and will not embrace can help physicians identify different therapies that suit

their patients' habits and that will hopefully make a difference for them."

Woolf and Bisognano, who is a member of the editorial board of the *Journal of Clinical Hypertension*, emphasize that all patients with hypertension should adhere to the low-salt DASH diet, which is high in fiber, low in fats and incorporates lots of [fruits and vegetables](#), and follow an exercise and weight loss regimen – lifestyle modifications recommended by the American Heart Association. Any alternative options should be considered for use in addition to these lifestyle changes. When it comes to safety, Bisognano adds, "These alternative options are usually harmless, except when they keep patients from taking medications they need to take. If a patient is taking a supplement instead of something that we know is useful, that could be a problem."

## **Dietary Supplements**

The shining star among supplements is coenzyme Q10, an enzyme involved in energy production that also acts as an antioxidant. Patients with hypertension tend to have lower levels of the enzyme, and a meta-analysis – an overarching analysis of past studies – found that treatment with coenzyme Q10 supplements significantly reduced blood pressure.

Woolf noted that "Coenzyme Q10 has a pretty profound effect on blood pressure, but whenever research is based on a collection of other data you have to have some skepticism." Woolf said he still thinks the compound is promising.

Woolf also found that potassium helps lower blood pressure, and there is evidence that increasing the amount of potassium we get through the foods we eat could carry some of the same mild benefits as taking supplements.

## **Herbal Remedies**

The potential herbal remedies Woolf identified include mistletoe extract, used in traditional Chinese medicine to treat hypertension. Mistletoe extract reduced blood pressure in animal studies, but Woolf cautions that it may be toxic at high doses. The extract from Hawthorn, a type of tree, is also used, but provides only a slight reduction in blood pressure. Conversely, Woolf uncovered a handful of herbal remedies – St. John's wort, ephedra/ma huang, yohimbine and licorice – that may increase blood pressure.

Woolf and Bisognano stress that the Food and Drug Administration does not regulate dietary and herbal supplements the way they regulate traditional pharmaceuticals. They say health care providers and patients need to be aware that the safety of these products is not always rigorously established and that formulations can vary.

## **Acupuncture/Meditation**

Research on both practices is mixed – the types of patients included, the methods used, and the results, which vary from study to study. While there is no conclusive evidence that either lowers blood pressure, researchers found that acupuncture reduces blood pressure compared to placebo in patients also taking anti-hypertensive medications, while in a meta-analysis, transcendental meditation appeared to lower blood pressure. Other techniques that may provide some benefit include Zen Buddhist meditation and Qi Gong.

## **Devices**

Some devices developed in recent years involve a medical procedure, while others use technology that requires patients to participate in

various exercises.

Those that involve a procedure include the implantable Rheos® device, which regulates blood pressure much like a pacemaker regulates heart rhythm, and the Symplicity catheter system, which ablates or destroys nerves around the kidneys that send inappropriate signals to the brain to increase blood pressure. Both are designed for patients with difficult-to-treat hypertension and led to significant drops in blood pressure in clinical trials. They are only available to research participants at this time.

Two devices that patients can use in the comfort of their own homes are the RESPeRATE breathing device and the Zona Plus hand drip device. The RESPeRATE system uses a breath sensor and gives patients feedback through headphones to help them slow their breathing, which research suggests benefits blood pressure. If used 15 minutes a day, studies show RESPeRATE leads to a modest decrease in hypertension.

Provided by University of Rochester Medical Center

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