



DECEMBER 3, 2014, 3:07 PM

**H** eart disease is a leading killer of Americans, and there are many factors that put people at risk. But among the top problems is something hard to measure – stress – according to Dr. Michael Miller, professor of cardiovascular medicine, epidemiology and public health in the University of Maryland School of Medicine and author of "Heal Your Heart: The Positive Emotions Prescription to Prevent and Reverse Heart Disease." He says there are actions everyone can take to lower their stress, and their risk of a heart attack.

### **What are the major risk factors for heart disease, and where do you rank stress?**

Nine risk factors account for well over 90 percent of heart attacks. In addition to the four major factors — cigarette smoking, diabetes, hypertension and high cholesterol — other risk factors include being sedentary, having excess abdominal (belly) fat, not consuming vegetables and fruits daily, and consuming alcohol. Last but certainly not least is stress, which represents up to 25 percent of heart disease risk. In fact, I would place stress at the top of the list of cardiac risk factors for two important reasons. First, unlike cholesterol, blood pressure and glucose, it can't be directly measured. This makes it impossible for health care providers to appreciate the amount of stress a patient may be experiencing on a day-to-day basis. Second and most importantly is that stress is the only risk factor that can directly impact all of the other eight risk factors. Think about it. When you are under a great deal of stress, blood pressure tends to increase, you are more likely to light up if you're a smoker, others will stop exercising and replacing their veggies with "comfort foods" that raise blood lipids, etc.



## **Everyone has stress, but why does it affect some people's heart health more than others?**

Stress can be good if it is over a short period and can serve as a means to an end. For example, being mildly anxious prior to an exam is favorable due to the release of chemicals such as cortisol that increases focus and concentration. And following the exam, depending upon how well you feel you performed, there might even be a release of endorphins that provide a protective effect on our blood vessels. The problem arises when we are faced with chronic stress or stress that persists for a long period of time. If not managed effectively, stress chemicals that are continuously released over time can damage our blood vessels and ultimately our heart.

### **What are some of the best methods of controlling stress and**

### **promoting emotional well-being?**

In my new book, I emphasize the mind-heart connection, the emerging field of behavioral cardiology. Three main categories are addressed to best control stress and optimize psychological well-being and emotional health. They include nutrition, exercise and positive emotions. It turns out that there are a variety of foods that are not only nutritious but also nourish our spirits by releasing mood-elevating compounds like dopamine and serotonin. I extensively researched the top mood-boosting foods fulfilling these requirements based on numerous scientific studies. Some foods that you may be familiar with include dark chocolate, but others such as artichokes may surprise you. Check out a listing of five examples on the Rodale website ([rodalenews.com/best-foods-heart](http://rodalenews.com/best-foods-heart)). Exercise is another important feature of my "Positive Emotions Prescription," but the good news is that you do not need to run marathons to attain benefit. I emphasize to my patients that they should try and remain active daily. This means enhancing our non-exercise activities throughout the day by not sitting still for periods exceeding 15 or 20 minutes at a time. Improving NEAT (non-exercise activity thermogenesis) can be a major mood enhancer. The third category may be the most surprising because it turns out that you can also improve your heart health through simple enjoyable exercises that directly impact positive emotions. Our research team studied the effect of laughter and joyful music on blood vessel function. Laughing and listening to joyful music release endorphins that leads to blood vessel dilation. This impacts and improves the flexibility of your arteries and can reduce blood pressure. Practiced daily, positive emotions could be the anti-aging secret for our blood vessels.