

## Matters of the Heart: A Q&A with Ehtisham Mahmud

By Scott LaFee | January 03, 2013

**E**very 34 seconds, on average, an American has a heart attack. Every minute, someone in the United States dies from a heart disease-related event. Both men and women are afflicted equally, if differently. More than one-quarter of the annual deaths in this country are due to cardiovascular disease in its myriad manifestations. It claims more lives each year than cancer, chronic lower respiratory diseases and accidents combined.



On the plus side, much has been learned about the biology of heart disease. Treatments have improved. Prevention is possible. We asked Ehtisham Mahmud, MD, a professor of medicine and cardiology and co-director of the UC San Diego Sulpizio Cardiovascular Center for a status report.

**Q:** Obviously, what we eat is important to cardiovascular health: A balanced diet in moderate amounts. It's the details that are confounding. Dark chocolate is supposed to be "heart healthy" due to an abundance of antioxidant flavonoids, but diet soda has been linked to cardiovascular risk factors like high cholesterol and hypertension. Coconut oil was once vilified, now some studies suggest its particular saturated fats might not be so bad. What advice do you have for people trying to make sense of ever-changing, contrary research?

**A:** The studies and guidelines have been fairly consistent about a "heart healthy diet" being one that is low in saturated fats, cholesterol and salt. Practically speaking, this means a diet that is moderate in quantity, minimal in fried foods and processed meats, and high in fiber, white meat, fruits and vegetables is best for cardiovascular health.

**Q:** Numerous studies say light-to-moderate alcohol consumption (1-2 drinks per day) appears to improve cardiovascular health. Are we reaching the point where limited alcohol consumption

might be officially recommended for cardiovascular risk reduction?

**A:** Original studies from France suggested that a glass of red wine a day was helpful in reducing the risk of cardiovascular disease. Other studies have shown an association between light alcohol consumption and potential reduction in cardiovascular mortality in some populations. However, the adverse risks of even moderate alcohol consumption on a regular basis include high blood pressure, obesity, stroke, congestive heart failure and liver disease. Additionally, with the potential addictive risk of alcohol, it is highly unlikely that even light alcohol consumption will be officially recommended as a mode of reducing cardiovascular risk.

**Q:** Is there any way to achieve good cardiovascular health without exercise?

**A:** Exercise along with a healthy diet and abstaining from smoking are three factors that are directly in control of the individual in reducing their personal risk of cardiovascular disease. Aerobic exercise of even 20-30 minutes at least three times a week is a powerful tool in reducing the likelihood of developing cardiovascular disease.

**Q:** The other main element in cardiovascular health is genetic, e.g. people's inherited predispositions to heart disease or specific abnormalities. How do you characterize the state of scientific and medical understanding here? Where do you see the greatest progress?

**A:** Family history of premature heart disease in a first degree relative is a strong non-modifiable risk factor for developing coronary heart disease. Rare individuals with familial hypercholesterolemia are also at an increased risk for developing premature coronary artery disease. Associations between certain genes and the development of atherosclerosis and heart attacks have been shown but routine genetic testing is not performed in the clinical setting yet. The main reason for this is that various familial/genetic predispositions help in identifying an individual's risk for developing coronary heart disease, but the development of the disease is multi-factorial. Knowledge of a predisposition can be used to aggressively modify other risk factors (diet, exercise, smoking cessation) to decrease the likelihood of developing the disease.

**Q:** What about heart replacement? Procedures involving transplanted or artificial hearts have become regular events. How close are we to being able to actually build or re-build a healthy heart, perhaps using emerging stem cell technologies?

**A:** There are approximately 2,000 heart transplants done annually in the United States, with the major limitation being the availability of donor hearts. Implantation of ventricular assist devices and even an artificial heart is now possible and performed at selected centers, including UCSD. However, stem cell therapies for building heart muscle are still investigational and are likely years away from routine clinical availability.

**Q:** What single aspect of cardiovascular health and disease in the United States most concerns you? What problem or issue would you most like to resolve?

**A:** Obesity with associated diabetes is not only a problem of epidemic proportions in the U.S., but worldwide. Poor dietary habits with a sedentary lifestyle have resulted in a quarter of our population being obese, with almost 10 percent being diabetic. This in turn leads to high prevalence of cardiovascular disease. A national effort to combat obesity is imperative and would translate into an improvement in cardiovascular health.

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