

Erectile Dysfunction and Cardiovascular Disease



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A 42 year-old male in otherwise good health presents to you with erectile dysfunction (ED). You should:

- A.) Provide samples of Viagra, Levitra or Cialis.
- B.) Send him for psychiatric evaluation.
- C.) Encourage him to begin jogging.
- D.) Perform a detailed history and physical examination with strong assessment of cardiovascular risk factors.

Cardiovascular disease is the leading cause of death in the United States, accounting for almost 40 percent of all deaths. We are well aware of the traditional risk factors for cardiovascular disease in men. They include high LDL, cholesterol, low HDL, hypertension, diabetes and smoking. However, can ED now also be considered a red flag for early cardiovascular events? Not only can we use ED as a means of detecting cardiovascular disease but can we use ED as a means of preventing cardiovascular disease. Several recent studies indicate a significant increased risk of CVD (cardiovascular disease) occurring within 10 years following the presentation of ED in men between the ages of 40 and 59 (Mayo Clinic Proceedings; 2009; 84(2): 108-113 and JAMA; 2005; 294(23) 2996-3002). While this has been shown to be highly significant in diabetic men it may also be a predictor in non-diabetic men as well.

Age does matter and ED and cardiovascular disease (CVD) frequently coexist equally in older men greater than 70 years of age (Journal of the American college of cardiology; 2008; 51(21) 2040-2044).

While the answer to our above question may seem obvious it may not always be the most expedient. Expectations of healthy middle-aged men may be unrealistic when it comes to diagnosis and treatment of ED. Many think they know why it develops and should be simply treated with medication. The physi-

According to a recent survey reported by Reuters.

Almost 70 percent of American men said they find it easier to care for their cars than their personal health.

40 percent said they would be more likely to address issues with their car than their health.

"For many men, tuning up our cars is easier than getting checkups for our health," NASCAR driver Terry Labonte said in a statement.

Labonte, who was named one of NASCAR'S (National Association for Stock Car Auto Racing) top 50 greatest drivers, is a spokesman for a national campaign launched by Men's Health Network and the drug company Abbott Laboratories which both conducted the poll, to encourage men to visit their doctors more often.

The survey of 501 men, aged 45 to 65, and their spouses or partners revealed that 28 percent of men do not visit the doctor regularly, and more than 40 percent of the women questioned said they are worried about their husband's or partner's health.

A similar number of women also said they are more concerned about their men's health than their own.

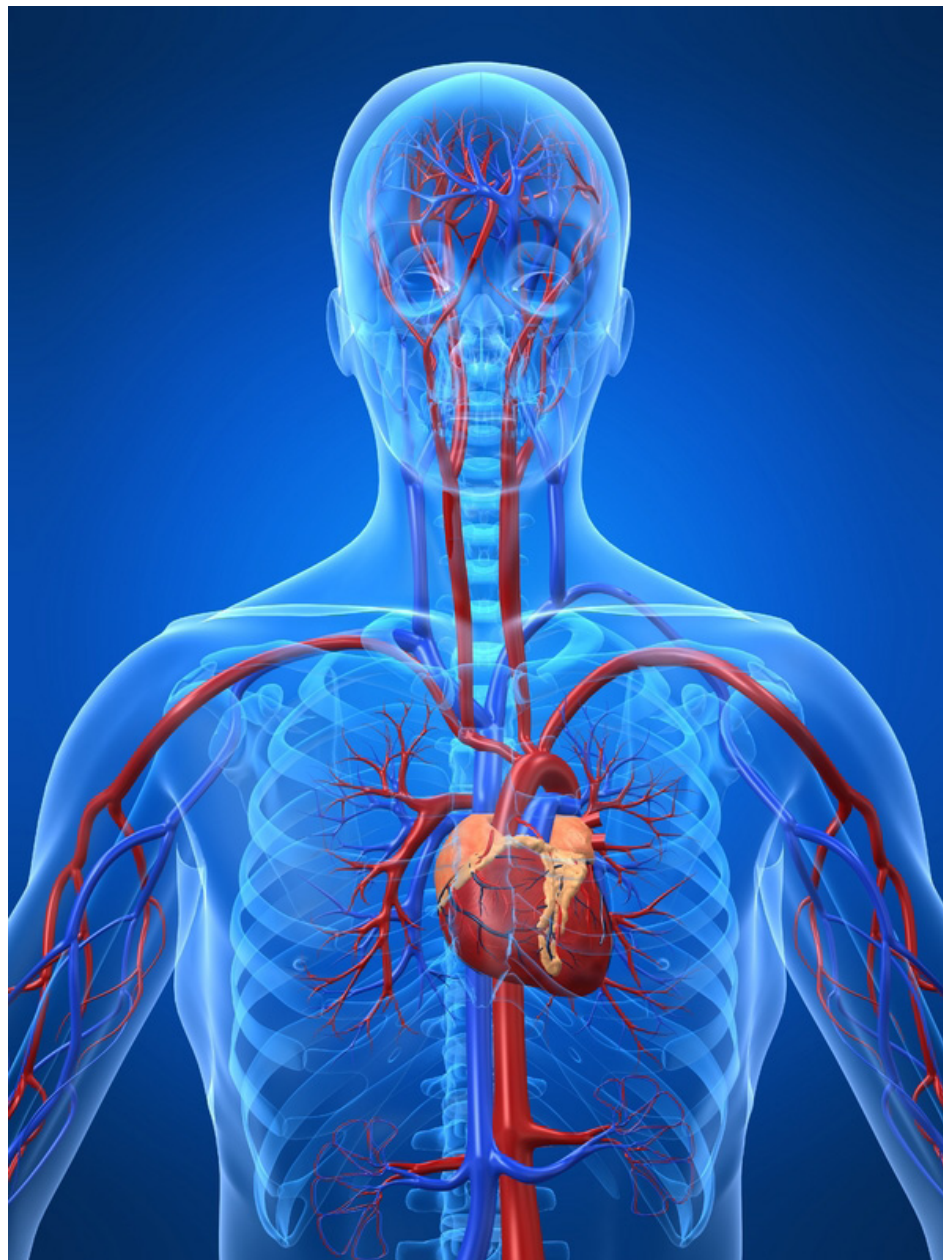
cian needs to educate men as to their normal erectile function and overall good health. That requires understanding of the disease and its' multiple etiologies and convening these in a non-discriminatory way.

CVD and ED share etiologies as well as pathophysiologic

mechanisms that lead to endothelial dysfunction and plaque buildup (see studies mentioned above). Research now shows vascular damage often shows up first in the small penile arteries and is manifested in the form of erectile dysfunction. The penis contains two cylindrical, sponge-like structures that run along the length of the penis. Nerve impulses cause the blood flow to increase to about seven times the normal amount when a man is sexually aroused. Vascular disease can restrict the blood supply to the penis, causing ED. Since the degree of ED coincides with the severity CVD, it has been suggested that ED can be a presenting symptoms to one with occult CVD (European Urology; 2005; 512-518).

Fifty percent of deaths due to coronary artery disease occur in men without a history of the disease. With recent observations that men are not seeking regular medical assessment “unless something is not working right”, the most common presenting symptom to a urologist in men age 40 to 59 may be ED. Similarly patients with CVD frequently describe pre-existing ED. Evidence is accumulating that ED and CVD are simply manifestations of a common underlying vascular pathology. Some longitudinal studies have suggested that ED is associated with approximately 80% higher risk of subsequent CVD (Journal of the American college of cardiology; 2008; 51(21) 2040-2044, JAMA; 2005; 294(23) 2996-3002). This can be explained partially by blood vessel size, penile arteries are 1 to 2 mm. in diameter compared to coronary arteries which are 3 to 4 mm. and carotid arteries which are 5 to 7 mm. Smaller arteries plug earlier than the larger ones. Another link is from endothelial dysfunction. Many men exhibit endothelial dysfunction and plaque buildup independent of cardiac

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status. This would also include inappropriate vaso-constriction in open vessels. The worst that can happen to an impotent young male is a flaccid penis. However, an egregious form of a penile heart attack is a major catastrophic cardiovascular event. We feel strongly, that current day evidence based medicine, mandates an aggressive CVD risk assessment in any male presenting with ED between the ages of 40 to 59.