High cholesterol and coronary heart disease in younger men: the potential role of stress induced exaggerated blood pressure response.

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Abstract

It is well known that by far the strongest association between serum cholesterol levels and the risk of coronary heart disease or related adverse events is found in younger men. The question is - what is different about this age-gender subgroup? It has been suggested that this enhanced risk is seen in younger men because of unique exposure to stress. While stress is known to raise cholesterol levels, the magnitude of the elevation appears insufficient to account for the observed association between cholesterol levels and CHD in young men. An hypothesis is presented which suggests that part and perhaps all of this association is due to the relationship between cholesterol levels and exaggerated blood pressure response to stress, i.e. individuals who exhibit this hyper-response also tend to have significantly elevated cholesterol levels. Given that both stress and an exaggerated blood pressure response to stress are also risk factors for CHD, this could influence the relationship between CHD risk and cholesterol in this age group even if multivariate analysis includes casual blood pressure. This is important since in risk assessment, especially among young men, cholesterol levels play an important role.

Reference:

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