



## **Stress and heart disease**

Does stress cause heart disease? Many cardiac patients, as well as people in the community generally, believe that it does. Much has been written to indicate that those with high levels of perceived stress may be more likely to develop coronary heart disease.

### **What is stress?**

Stress is a part of life. The stressor may be something actually or potentially unpleasant. If it is perceived as a threat, a sensation of stress is felt. This is coupled with stimuli which lead to multiple bodily responses which could be regarded as mechanisms to increase our capacity for flight or fight – to run or to overcome, to submit or to defend. Most of us are rarely confronted with a crisis where such a response is required or valuable. We are more likely to feel continuing unease from some continuing perceived danger from without or threatening thoughts from within. If stresses continue or multiply, they may overwhelm us, inducing a sense of despair, hopelessness or depression.

### **Is chronic stress a true risk factor for heart disease?**

Physiological effects of stress, including neural, hormonal and physical responses, are similar to those of exercise. But exercise protects against developing heart disease. Psychological responses to stress vary markedly between individuals. Some relish stress and function better with deadlines and multiple pressures, including those of work. Some may be overwhelmed, even if the stresses may be considered by others to be insignificant. Stress may be handled by physical activity (walking, running, gardening, gymnasium activity etc) – all of which are beneficial. Some may bury the stress, switching off, denying the existence of stress and suppressing it through relaxation or diversions. Others may smoke more or sit, drink, brood, eat and put on weight. These last habits may possibly lead to higher cholesterol levels, higher blood pressure, acceleration of arterial disease, blood clot formation and heart attacks.

Could it be that the nature of the behavioural responses to stress (those listed above and others) determine whether the effects are beneficial, neutral or harmful? This may well be the case. It seems that it may not be the perception of stress or the degree of stress but the individual's behavioural responses to

the stress that influence the progress of arterial disease, particularly coronary artery disease, which can lead to heart attacks.

### **Does acute stress cause heart attacks?**

Acute stresses, such as major exhausting activities, injuries, accidents, profound psychological trauma, even earthquakes, have been shown to be closely followed by both sudden unexpected deaths and by non fatal heart attacks. A recent study following a Californian earthquake showed increased deaths in the ensuing days but fewer deaths in subsequent weeks. Thus, it seems that the stress of the earthquake contributed to heart attacks occurring that and the next day, rather than next week. There are always some people in the community who are on the brink of a heart attack. An acute stress, either of a physical or psychological nature, may trigger its occurrence. It may also trigger the appearance of symptoms which indicate the presence of the underlying coronary artery disease. That recognition could lead to treatment earlier than may otherwise occur - a benefit.

### **What can we do about stress?**

We cannot control earthquakes and collective disasters. We may be unable to do much about personal crises. It may or may not be possible to reduce stress. We can, however, modify our responses to stresses. It is important to address the stressors, the causes of our discomfort or misery. It may help to learn to relax and ride above the turbulent drowning waves. It should be possible to adopt avoiding mechanisms and to seek ease in activities or diversions, rather than to submit to the sensation of stress which, though meant to protect us, may consume us.

Further, we can control our development of cardiovascular disease through being active, controlling weight and cholesterol and avoiding smoking. If we avoid having cardiovascular disease, we'll not die from it, no matter what trigger there may be, whether acute or chronic.

We all differ in our approaches, perceptions and responses. These differences in personality and behaviour patterns and their possible relationship to the development of heart disease will be addressed in a later newsletter.

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