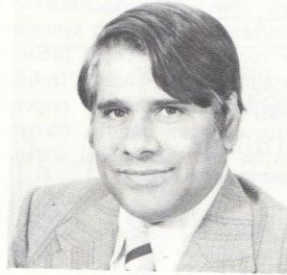


Stress And Physical Illness



by Dr. M. Basheer Ahmed

Nineteenth century scientist Cannon postulated that arousing or stressful events lead to a specific sequence of activity in the endocrine and nervous system, producing physiological changes. These series of reactions prepare animals to deal with stressful events by fight or flight reaction. Thus, in situations causing emotional arousal, all bodily resources are mobilized in a biologically purposeful fashion eg., increase in blood sugar, increase in respiration for oxygenation and an increase in blood flow to vital organs. Similarly, stressful events also cause increased production of various hormones. Prolonged emotional arousal produces transient pathological changes in various organs of the human body. Sometimes, as a result of persistent arousal, transient changes become pronounced and continue for an extended period of time. More recently, researchers have been able to induce a variety of disease entities including hypertension, renal failure, atherosclerosis, coronary disease, myocardial infarction and sudden death by producing stressful situations in animals.

There is an increasing evidence

of importance of psychosocial personality and behavioral factors in the development of coronary heart disease. Freidman described type A personality traits in patients with coronary heart disease. These individuals have excessive drive, sense of urgency, upward striving and impatience. Researchers have also studied the relationship between stress and physical illness and developed a list of forty-three life events that normally require adjustment to one's pattern of living which they believed might trigger stress. These life events



include divorce, change of jobs, death of a loved one, retirement, or moving. Studies demonstrated an elevation in the level of life change scores (highest number of life events) in a six month period prior to myocardial infarction, compared to corresponding six month period in the same period one or two years previously.

Sudden death is not recognized as a major mode of fatality in patients with heart disease. Death is usually resulted from ventricular fibrillation. There has now been sufficient evidence about the psychological factors which precipitate the ventricular fibrillation. Lown, a famous cardiologist, explained the occurrence of fatal ventricular fibrillation as follows: "Patients with ischaemic heart disease show electrical instability in heart muscle. A significant emotional distress in these individuals can trigger arrhythmia resulting in death due to ventricular fibrillation. Stress is not just a health hazard; it leads to social, marital and vocational problems. Most commonly, people under stress experience fatigue, exhaustion, instability or failure to concentrate. Stress may also result in inefficiency, work pile up and

lack of motivation. Some individuals may experience physical symptoms, eg. nervous itch, pimples, twitching eyelids, etc. Others may experience anxiety, depression, poor appetite, sleep and loss of libido. Stress may also lead to smoking, drinking or taking drugs.

To define stress that is not always harmful, Selye has used the term "Eustress" as opposed to distress. Eustress results from pleasurable activities such as humor, love and creativity. Type A individuals who are productive, creative and enjoy their work are a less risk for heart disease than those who are frustrated by an inability to achieve unrealistic goals. It must be remembered that stress may result not only in unpleasant psychological experiences, but is more likely to precipitate the breakdown of adaptive and coping mechanisms which ultimately results in persistent physiological disturbances and

pathology.

Anxiety is the most common symptom produced by stress. It is important that we should recognize our level of stress tolerance and avoid pushing beyond endurance and watch for psychophysiological responses such as anxiety, increased heart rate, stomach upset, high blood pressure and sleep disturbance. When such symptoms are recognized, accept these as warning signals. Sharing feelings, assessing the amount of responsibility one can handle, physical exercise and recreational activities



are all helpful factors in dealing with stress in a positive manner. Stress may be resulted from multiple problems or feelings of loss of control. Make a list of problems and establish priorities, and solve one problem at a time. If the individual is not able to resolve stressful psychological pressure in life or resolve conflicts resulting in inner stress, he or she should seek professional help. Physicians may recommend anti-anxiety agents to a few selected patients in whom anxiety is associated with physical problems such as cardiovascular disturbance, gastric problems or major impairment in normal functioning.

Determining how stress management can be introduced into the work place and what its effects are in reducing cardiovascular risk is one of the great challenges of the 80s. By learning healthy ways of coping with life stress, one can prevent the harmful psychological and pathological effects of stress.