Stress Prevention and Management: A Challenge for Patients and Physicians

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Chronic stress is now the commonest contributor to ill health in modern societies. The cost of stress in terms of absenteeism, lost productivity, and health care expense is rapidly increasing. As the problem continues to worsen, there will be an increasing need for interactive systems designed to help people cope with stress. Effective prevention of stress's adverse effects will require the widest possible deployment and implementation of stress reduction strategies.

IS STRESS AN INEVITABLE concomitant of modern life or is it just an inappropriately and indiscriminately employed diagnostic term? Apart from its serious medical import, the word "stress" is widely used in popular culture to describe a multitude of self-diagnosed physical and mental ailments whose severity is largely a matter of personal perception.[1] This undisciplined way of looking at stress tends to put the subject out of focus.

Every organism has to cope with stress, and resistance to stress is often related to increased longevity.[2] However, the concept of stress is too often confused with "challenge," an important component of a healthy and productive life. In contrast, the stress that causes "burnout" (characterized by the 3 distinguishing qualities of exhaustion, cynicism, and inefficacy),[3] is chronic and either self-imposed or inherent in one's work or social environment.

Stress, regarded as a risk factor (see VanItallie, this issue), is far removed from the popular concept of this condition. Nevertheless, stress-related problems are now so common in the world's populations that they are beginning to replace infectious diseases as the most significant contributor to global ill health. Consequently, the total economic cost of stress is huge.

STRESS AS A MEDICAL PROBLEM

The acute post-traumatic stress disorder (PTSD) that occurs in military combat or as a result of severely traumatic experiences in civilian life differs in many ways from that found in chronic exposure to psychosocial stress.[4] The most common and unavoidable stressors are those related to work overload,[5] job strain,[6] psychosocial problems in the workplace,[7,8] environment,[9] lifestyle,[10] situations involving various types of life crisis,[11] and extremely demanding professional[12,13] or educational responsibilities.[14] Of course, biological susceptibility to stress stimuli must also play an important part in determining the effect of stress on health and well-being.

Accumulated evidence from clinical and experimental studies indicates that stress causes or exacerbates many health problems. Lack of educational attainment, social alienation, and low occupational prestige have significant associations with incident diseases such as hypertension[15] and diabetes,[16] through a relationship with other risk factors. Marital stress, for example, is associated with an elevated risk of recurrent events in women with coronary heart disease.[17]

From the clinical standpoint, it can be predicted that different strategies will be needed for the initial phase of stress management and for the subsequent effectiveness of health promotion programs.

WHAT IS NEEDED ?

More information derived from animal models[18,19] and from theoretical models[20-22] on the potentially stressful effects of the psychosocial environment, job stress, burnout syndrome, and life dissatisfaction, is needed to identify populations at risk. The data generated from these different models[23] and theories[24] are necessary to characterize various aspects of stressful conditions, and to develop and assess the effectiveness of theory-guided preventive activities in the future. This is the focus of a multicenter prospective study now under way on job stress, absenteeism, and coronary heart disease in Europe.[25]

WHAT CAN BE SUGGESTED?

Prevention is better than cure. More detailed and specific models of psychosocial dynamics in the work environment, and of well-being, should be developed. A nationwide and longitudinal postal survey entailing the use of a questionnaire that solicits information about common stressors, using an appropriate stress scale, could be employed to identify the different subgroups of people deemed suitable for group-oriented intervention. Multivariate analysis of the data so obtained would be useful for identifying predictors of the onset of overt disease in subjects at risk. Moreover, these data might be helpful in determining the times at which assessment, psychological support, and attempts to improve environmental factors are likely to be most effective.

Stress reactivity—a characteristic that could serve as a long-term predictor of risk—is modulated by both genetic and environmental factors, and marked variability in individual responses to a variety of stressors has been frequently observed. Since individual reactions to physiological and emotional stress vary, research has to involve the study, concurrently, of both populations and individuals.It would appear that the best way to decrease the adverse effect of stressors is by individual treatment, which should focus on personal difficulties at work or outside of work.

Public health interventions and potential strategies to combat the "stress epidemic" by promoting an environment that provides healthy conditions at the work site, as well as attending to the psychosocial environment and the need for increased physical activity, have to be developed. Early adoption of a healthy lifestyle may be the best approach to reducing the burden of

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stress on health. Thus, educational institutions—from grade school to colleges and universities—are potentially very desirable sites for educational, behavioral, and motivational programs designed to alleviate the burden of stress.

Continuing education may reduce the impact of occupational and psychosocial stressors. However, educating general practitioners and hospital-based specialists to deal effectively with the problem of stress is a time-consuming component of an adequate stress management program. A computer-aided learning system could be developed for the education of both physicians and the public that addresses the different types of daily life stress and their consequences. Such a system could help people deal constructively with lifestyle difficulties (eg, smoking and alcohol abuse) and stressful problems encountered in the workplace. As one example of a system that is already in place, an interactive educational diabetes simulator was released in 1996, without charge, on the internet.[26] Since its inception, more than 58,000 people have visited the web site.[27] Another example is a program devised to prevent weight gain. If large numbers of obese individuals are to be treated economically, use at home of a nutrition management system assembled by experts could partly replace traditional management.[28]

These interactive systems employ multimedia technology to provide practical behavioral guidance and consolidate theoretical understanding. In the future, appropriate interactive systems will be developed to improve formal evaluation of stressful conditions, identify the various methods available to help people cope with stress, and offer guidelines to a successful specific prevention program.

Stress monitoring programs for each subgroup at risk can and should be designed, implemented and evaluated. These programs to help people to adapt their behavior can be justified on 3 grounds: (1) social and health benefits; (2) reduction of risk factors for chronic diseases; and (3) psychological well-being.

CONCLUSION

Teaching people to cope more effectively with stressful occupational and social situations and self-damaging emotional states may increase the efficacy of prevention of such stress-induced illnesses as obesity,[29] diabetes,[16] ischemic heart disease,[30] immunodeficiency,[31] burnout syndrome,[32] mental disorders,[33] and excessive alcohol consumption.[14,34] The ultimate therapeutic goal is not drug administration but rather public education.

Different approaches must be combined into integrated strategies to obviate or minimize the burden of stress at work, as well as in social life. Widespread inculcation of good health practices—particularly if these practices can include skills in avoiding and coping with stress—will be beneficial both to individuals and to the public health. “Take away my stress and let me run!”

The concept of using information gained from the everyday, health-related experiences of people to help guide the medical decision-making process needs to be given careful consideration. Use of such information in the future development of stress prevention and stress management programs would seem to be an essential requirement for achieving a meaningful reduction in morbidity and mortality from stress-associated diseases.

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