Executive Stress Issues: Steelcase

1. Planning for Retirement

2. Able to control anger and stress by expressing it and then letting it go [redacted]. The most difficult things is having to deal with persons outside the company where he can't exert the control he can exert within the company. High need for organization/perfectionism).

3. [redacted] dieting is something that I can control.

4. [redacted]. Why are you afraid of your anger: I like to have control at times, afraid of what I might do. I perceive my parents as very critical. I can't let myself lose a bit of control (silver medal athlete).

CENTER FOR EXECUTIVE STRESS

PRELIMINARY DRAFT OUTLINE

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as a part of the International Institute of Brain and Behavior

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1. The Need for Research on Executive Stress and Human Health: Background: Morbidity, Mortality, Costs to Nation.

It has been estimated that premature death cost U. S. industry at least 25-billion dollars each year, and that for executives alone, American industry loses between 10 and 20-billion dollars annually through lost work days, hospitalization, and early death caused by stress. Evidence is mounting that stress is a risk factor for illness ranging from cardiovascular disease to immune disease, cancer, obesity, gastrointestinal disease, and physical disorders. Further, stress may be implicated in and related to certain mental disorders such as schizophrenia, depression, anxiety disorders, alcoholism, drug abuse, and sleep disturbances. These are major health problems for business and industry and the nation at large, and the cost both in personal suffering as well as financially through lost productivity is considerable.

For example, U. S. businesses paid out 50-billion dollars in health care costs in 1980. Medical costs, which amount to 10% of the corporate budget, are rising 20% annually. The National Heart, Lung, and Blood Institute estimated in 1981 that 26-million work days were lost annually in the United States industry due to hypertension related illness. Heart disease accounts for more than half the deaths in the United States. It is also responsible for an annual loss of 132-million work days. Five-hundred-twenty-five thousand Americans use tranquilizers, consuming 200-million dollars worth of them annually. Headaches, another manifestation of stress, affect nearly a quarter of the American population each year and are the leading cause of lost time in business and industry. Another stress induced illness is ulcers. It has been estimated that 10% of the nation's population will suffer from them at some point in their lives.

Even a cursory review of the frequency of stress management and stress related articles in the major business journals and magazines, or the plethora of popular self-help books on the newsstands, reveals the extent to which the nation perceives stress as a major problem. The identification, development, refinement, and evaluation of assessment, prevention, and treatment regimes for stress becomes a critical imperative. Basic biological as well as biobehavioral, behavioral science, and behavioral medicine efforts can have an incalcuable effect in alleviating stress related suffering both for business and industry in Orange County, and for the nation at large.

2. Advantages of an Executive Stress Program.

Increasingly, business and industry are recognizing the importance of health education programs as part of their corporate structure. More than 60% of the Fortune 500 companies now offer programs in stress management. Corporations, insurance companies, and hospitals are investing millions of dollars to promote good health, reasoning that the expenditures ultimately will reduce the cost of disease care, decrease absenteeism, decrease sick leave utilization. It has been suggested that the average white collar company could save about $466,000 in medical cost per 1000 employees annually by helping them reduce disease factors in their lives. It is clearly less expensive to hire a worker and keep that worker on the job than to replace him or her and hire another one. Pacific Mutual Life estimates that the average cost of replacing a high level corporate executive ranges from $250,000 to $500,000 including recruitment costs, severance pay for the former employee, and training expenses for the new employee.

Further, it has been shown that troubled employees typically have two to four times the absentee rate of their coworkers, six times the accident

rate, and draw three times their colleagues sickness and accident benefits. These statistics cannot measure the employees lack of attention to the job or the losses due to muddled thinking when important decisions must be made, nor do they address the poor morale that prevails when others must do their work. Based on their Employee Assistance Program, Firestone Tire and Rubber Company claimed 1.7-million in annual savings in "just absenteeism, accident and sickness, and medical and surgical costs." The U. S. Postal Service reported saving $1869 per person annually in sick leave and leave without pay. Kennicott Corporation found that 150 men involved in its Insight Program showed a 52% better attendance on the job, a 75% cut in weekly indemnity cost, and a 55% drop in health, medical, and surgical cost."

The Stress Management Program of Mead Packaging saved $32,000 to $60,000 annually due to reduced absenteeism of alcohol abusers; and the Biofeedback/Relaxation Program of Equitable Life Insurance has shown a 1:5.52 cost benefit ratio.

Further, the stress and strain claims due to "occupational stress" have become an increasingly important litigation item and is predicted will become more so during the 1980's. It is to the advantage of business to show that they are taking a preventive role in decreasing the harmful effects of social and physical stress. In addition, an American Management Association Survey of what workers wanted most from a company found that "help with personal problems" ranked ahead of job security, good wages, and promotion possibilities. Finally, stress may not be only a problem, and the excitement, energy, and motivation of stress, if channelled properly, may enhance productivity, motivation, and job satisfaction. If not, it may cause many of the problems suggested above.

The Surgeon General's report on Health Promotion and Disease Prevention, noted that the leading cause of sickness and death in the United States all have substantial behavioral components. The report recommended that these behavioral causes: smoking, poor diet, stress, be the main focus of the United States efforts in health promotion and disease prevention. If the Surgeon General's report is accurate, research and practice in preventive and health care promotion may give a large benefit per health care dollar.

Thus, target benefits, in addition to reducing medical care costs, decreasing absenteeism, decreased turnover, decreased replacement costs, decreased premature death, can result in improved labor management relations, enhanced job satisfaction, decreased illness, and increased productivity.

3. A Brief Summary of What is Known About Stress.

There have been over 110,000 articles written about stress and they cover a wide variety and range of issues, ranging from the biochemical changes associated with stress, to the role of environmental and occupational factors in exacerbating stress. Stress is a common phenomenon to almost every individual within society, and each individual has their own person specific response to stress. All of us have probably experienced at some point in our lives one or more of the following stress related feelings: sweaty palms, butterflies in our stomach, heart racing faster, tension or tightness in our neck and shoulders, our mind whirling quickly. Some forms of stress may be relatively mild and even exciting, whereas the experience of over-stress or chronic stress and the behavioral and emotional components of obsessive, compulsive thinking, racing heart, cognitive and somatic anxiety, feelings of inability to cope, being out of control, can cause

great disability and suffering to the person. Psychosomatic disorders, sleep problems, and exacerbation of emotional illnesses may all be results of stress related suffering.

There is a large and diverse array of evidence of the effect of stress on predisposition to or precipitation of and perpetuation of a number of major physical and mental disorders. Early studies looked at peptic ulcers, hypertension, and bronchial asthma; more recent studies have studied some mental illnesses, suggesting mechanisms to account for the onset and course of psychological disorders like depression and schizophrenia. Finally, in the past few years biological sciences have discovered a growing number of substances and systems through which the brain can monitor and exert control over the rest of the body/biological substraits giving us more detailed information about biochemical and physiological aspects of stress. Further, the ability of stressors to effect the cardiovascular system has long been recognized, and, as discussed in Section 4, Type A individuals can be identified reliably and there is a clear consensus Type A behavior is a risk factor for coronary heart disease.

Even with all the research, stress still remains a complex, multidimensional subject, and there are multiple methodologies and techniques utilized to assess as well as treat it. At the broadest level, stress may be conceptualized in terms of four areas: a) stressors or events; i.e., that which causes stress, exacerbates it, or is antecedent to it; b) reactions; i.e., the complex multidimensional subjective as well as physiological reactions of the individual to stress; c) consequences of stress from both a biochemical to a behavioral level; and d) mediators of the stress response.

4. Contributions of Recent Neuroscience, Biobehavioral, and Behavioral Science Research to our Understanding of Stress.

There has literally been an explosion of information related to multiple aspects of stress. On the one hand, basic scientists are measuring with increasing sensitivity the effects that severe stressors could have on hormonal response, brain function, and on the cardiovascular, immune, and endocrine systems. Techniques for quantification of biological and physiological changes are improving rapidly. Newly developed biological, fluorimetric, chromatographic, enzymatic, and radioimmunilogical assays now enable investigators to assay minute amounts of neuroregulators and their metabolites. There is some evidence that stress can be a risk factor for the occurrence of an acute episode of schizophrenia in some people who already have a predisposition to that disorder. Stressors can be risk factors for such disorders as heart disease, peptic ulcer disease, cancer, bronchial asthma, depression, and schizophrenia. Depending on the disorder, the stressors may be predisposing factors, may precipitate the diseased people who already are at risk, or may precipitate it once the disease is present.

Well controlled studies have documented that disruptive life events are associated with an increased number of mild and severe physical and mental disorders. Job loss, bereavement, moving to a new location, or marriage have been associated with increased likelihood of developing minor infections, sudden cardiac death, cancer, and depression.

Research on occupational stress suggests that work related stressors such as monotony, shift work, automation, innappropriate work load, and inadequate support systems are associated with adverse health consequences for a large number of individuals exposed to them. Further, there is clear evidence that a specified behavioral pattern (Type A) characterized by

hostility, competitive achievement striving, and impatience is prospectively associated with increased risk of suffering coronary heart disease.

In terms of stress assessment, stress can be primarily determined by verbal self-report, but investigators are currently looking into brain evoked potential, as well as the spatial/temporal pattern of activity recorded from the EEG during and immediately following the presentation of a stress related event.

5. Stress Management Treatment.

In the past decade there has been enormous interest in a variety of techniques which can be utilized by individuals to develop more effective control over their own behavior and cognitions. These techniques, broadly subsumed under the label self-control strategies, include but are not limited to behavioral self-control, biofeedback, meditation, self-hypnosis, cognitive behavioral therapy, autogenic training, guided imagery, and progressive relaxation. Research suggests that individuals are not only able to develop more effective control over the voluntary nervous system, but, contrary to classical neurology, may develop some degree of control over the autonomic nervous system.

Current research on stress management is attempting to become more sophisticated in clinical stress assessment ranging from patient subjective estimations of one or more dimensions of the stress experience; behavioral assessment; and assessment of personality attributes that may be related to patient stress experience; the development of prospective instruments which can predict illness based on major life events; i.e., life changes, and stress; as well as the relationship of lifestyle and stress. Efforts are then being developed to match the appropriate self-control strategy to the

particular person with a particular type of stress. There is increasing recognition that some combination of multiple interventions, cognitive interventions (i.e., self-instruction; covert imagery; thought stopping; interpretation of events); behavioral interventions (i.e., lifestyle modification; habit control; diet; exercise; physical relaxation); pharmacotherapy interventions; development of adequate social supports (including communication skills, assertiveness training, values clarification); may greatly influence how an individual responds to a disruptive life event, and be important to the development of an overall effective stress management program.

Further, any stress management treatment would want to consider the positive aspects of stress. For example, stressors may have a conditioning effect, just as physical exercise can improve muscle strength and endurance. Therefore, in addition to the above strategies, there may be times when it is appropriate to develop and enhance, if needed, the positive use of stress related to increasing motivation, developing higher achievement, and more perserverance and follow through on task performance. There are computerized health assessment batteries for use in corporate health management programs which could be utilized and refined as part of a systematic evaluation of treatment assessment and effectiveness.

6. Interesting New Research That Needs to be Undertaken With Respect to Stress.

There are currently many exciting developments with respect to research on stress. These are proceeding on multiple fronts ranging from the substantial advances in understanding both the brain mechanisms and systems that connect the brain with other parts of the body in the neurosciences, to the state of the art treatments in behavioral medicine suggesting ways in which individuals can develop greater control over both the voluntary and autonomic nervous system.

In terms of biological or basic studies, one of the most clearly relevant groups of compounds as a neuroregulator are the endorphins, endogenous peptides that appear to be involved in brain regulation of pain perception and response. For example, inescapable shock in rats caused an increase in certain brain endorphins, and a parallel change in pain threshhold, indicating there may be substantial connections between stress and pain. For example, adrenocorticotrophic hormone (ACTH) and beta endorphin are produced from the same precursor and located in the pituitary in two types of cells, suggesting that there may be links between the endorphins and the pituitary adrenal system perhaps as a means of coordinating stress responses. Other central neuroregulators that may be promising include norepinephrine, epinephrine, and seratonin. It has been shown that Type A individuals excrete more norepinephrine in the urine during a typical day, and secrete norepinephrine into the blood under the challenge of a stressful puzzle-solving task. And it has been found that excess epinephrine secretion and cardiovascular hyperresponsivity is present among Type A men. It is hypothesized that coronary atherosclerosis disease and coronary heart disease among Type A persons is mediated by increased levels of sympathetically mediated cardiovascular response to a wide variety of behavioral challenges.

There is also interesting work involving the pituitary/adrenal/cortical axis as a possible contributor to excess risk among Type A persons. A related interesting area is the evidence that the immune system may be influenced directly by brain activity. One of the exciting areas for further research is to look at how transient changes in neurophysiological, endocrine, autonomic, or immunilogical functions associated with exposure to stressful stimuli sometimes produce more enduring alterations that lead to disease.

Additional research would involve looking both at the central neuroregulators mentioned above, as well as perepheral neuroregulators (corticosteroids and catecholamines) to try to understand how they can be applied to the cardiovascular system, the pain system, and the immune system.

At this point, interesting areas to explore also include the following: developing more specificity between certain stressors and particular disease outcomes, for almost nothing is known about the intervening chain of biological and psychosocial events that convert reactions to stressors to subsequent disease consequences. This research needs to look at the interaction of person factors, process factors (i.e., person/situation) and environmental factors. Person factors would include genetic variables--biological predisposition to illness; and biological factors would include those variables not genetically transmitted (i.e., diseased organ).

Other topics include genetics of stress (vulnerability to stress); biological correlates of stress; and the biology of coping. We would also want to look at alcoholism and drug abuse which may result from an effort to cope with life stresses; and the relationship between sleep changes and stress. We would want to look at the relationship between stressors (events) and consequences associations which might yield diagnostic tools for identifying people at high risk for specific diseases. Understanding stressor,reactions,and consequences may create the knowledge base needed to design preventive interventions rationally. These may entail psychotherapy, pharmacotherapy, changes in the psychosocial environment, or some combination. This would entail multivariate analysis of stressors from alpha endorphins to smog and environmental stressors.

Also, the importance of research to document the effects of any program on lifestyle disease needs to be highlighted, making sure that human behavior, biology, and environment are all included in the analysis. Further, in terms of executive stress, any stress management program would need to be evaluated for its benefits both in terms of specific business objectives: absenteeism, sickness, productivity, job satisfaction; as well as personal subjective feelings from the individual; i.e., an assessment of both organization and the person.

7. Avenues Which Need to be Pursued.

There are three different areas which need further development and elaboration. The first involves the practical needs of setting up a center and includes three: 1.1) development of space; 1.2) development of a high quality brochure for marketing; and 1.3) development of specific objectives and training programs for utilization.

Item #2 involves further investigation of programs in the United States and internationally (particularly Japan) which have executive stress programs. This would include visiting UCLA, Harvard, Duke, Baylor, and the Menninger Foundation for the University Clinic side, as well as IBM, Toyota, Mead, and Kennicott from the business side. In Japan, there are several corporations which are perceived as models such as Mitsubushi which could be studied, as well as the work of the Tokyo Stress Research Center.

The third task is targeting specific Orange County business and industry which may be interested in such a program. This includes the Orange County Industrial League; UCI Business and Industrial Associates; the Medical Research and Education Society at UCI; developing greater links with the Graduate School of Management at UCI; and sending a proposed packet to the Chancellor including

goals and objectives of the program ranging from clinical service to corporations; to a research foundation as a potential recipient of funding from corporate foundations.

For the conference on Business and Health, May 23, 1985

EXECUTIVE WELLNESS CENTER
Research and Clinical Programs in Health Promtion and Disease Prevention

The Executive Wellness Center is a multidisciplinary clinical, research, and training program specializing in assessment, understanding, intervention, treatment, and evaluation of stress related disorders and diseases of lifestyle.

IMPORTANCE OF WELLNESS

A major revolution is taking place in health care, one which involves individuals taking more responsibility for their own health. One of the major reasons cited for the decrease in deaths due to heart disease among Americans during the last twenty years involves the movement toward healthier lifestyles.

Many of our most serious health problems are related to our lifestyle--smoking, improper nutrition and diet habits, insufficient exercise, chronic stress, and abuse of drugs and alcohol. Today, with our incredible advances against infectious diseases, more than ever "the way we die is directly related to the way we live."

As David A. Hamburg, currently head of the Carnegie Foundation and former president of the National Academy of Sciences Institute of Medicine said, "We have missed valuable opportunities to reduce our burden of illness by underinvesting in programs for disease prevention and health promotion. Over the last decade, it has become increasingly clear that cardiovascular disease, cancer, stroke and accidents--which together account for nearly 75% of the deaths annually--are

intimately linked to a variety of health damaging behaviors ranging from smoking to drunk driving to sedentary lifestyles."

TOWARD A PARTNERSHIP BETWEEN BUSINESS AND UCI'S EXECUTIVE WELLNESS CENTER

Business has become increasingly aware of the importance of health promotion and the realization that "employees are, in fact, their most important asset." There are compelling humanitarian, as well as bottom line reasons for this. In terms of the latter, Pacific Mutual Life estimates that the average cost of replacing a high level corporate executive ranges from $250,000 to $500,000, including retirement costs, training of the new employee and severance pay for the former employee. The National Institute of Health reports that each year, for executives alone, American industry loses up to twenty billion dollars annually through lost workdays, diminished productivity, direct health related expenses, increases in insurance premiums, hospitalizations and early deaths caused by stress-related diseases.

To deal with this very real problem many non-university based programs have sprung up offering different piecemeal programs to the community. Unfortunately, some of the programs, and most of the data on effectiveness is not as rigorous or firmly grounded as it should be.

Therefore, at the Executive Wellness Center we are proposing a partnership, a co-venture with business. On the one hand, there needs to be a firm foundation in research in order to make sure that programs that are being advocated, utilized and undertaken are, carefully monitored, assessed,and evaluated to

continually improve their effectiveness. This has been, and is, a major strength of a research-based university. On the other hand, health promotion certainly cannot be an ivory tower exercise, and therefore requres the active participation and interaction of the College of Medicine Faculty with the business community.

As one step towards this, we are proposing the development of an Orange County Wellness Council for Business. We believe, particularly in the area of health promotion and disease prevention, it is important that there be exceptionally close collaboration between the University and the business community.

A health promotion program, based in a university setting, maintains the commitment to scholarly rigor and research which is critical to evaluate the effectiveness of programs, at the same time acknowledges the need to move beyond "an ivory tower stance" into the real world to meet and cooperatively address business's needs. The potential for cooperative and joint ventures within this arena has an enormous potential to improve productivity within the business community, reduce health costs, develop a firmer and more substantial research base, which will have practical significance to the nature and type of health promotion programs that are utilized. This offers business and the university the opportunity to cooperate in promoting the health and well-being of individuals in our community.

RESEARCH PROGRAMS AT THE WELLNESS CENTER

The crucial role of behavioral, cognitive and environmental factors in health and disease are being increasingly recognized. Therefore, research on control, self-control, and self-regulation

strategies are particularly critical. This includes such topics as (a) studies on which type of self-control strategy is most effective for a particular person (b) given the fact that most of us know what are proper health and lifestyle habits, what prevents us from carrying those habits out, i.e. issues of adherence and compliance in self-management strategies; (c) what is the relationship of too high a need to control (overcontrol), and the components of Type A Behavior pattern, which involves irritation, a sense of time urgency, hostility, aggravation; and what are the most appropriate relaxation and time management strategies.

Further, a more in depth research focus on an understanding of the nature and mechanisms of chronic stress, as well as the most effective treatment interventions, is critical. Research is showing that a great deal of sophistication is necessary in order to match the correct self-regulation stratetgy for a given individual's personality and termperament. Research is also showing that there are certain individuals who have a "hardiness to stress"; some who are "addicted" to stress; and that there may be ways to build up resistance to, or "innoculate", individuals against the deleterious effects of stress using cognitive/behavioral strategies.

Additional research looks at the other risk factors and potential variables of lifestyle involved in chronic disease: diet and nutrition, smoking, exercise and physical activity, social support and emotional expressiveness; as well as applied clinical research which can directly contribute to the health

promotion efforts in the business community.

CLINICAL SERVICES OF THE WELLNESS CENTER

The Wellness Center is the only program of its kind in Orange County affiliated with a major medical college and university physicians and faculty. It offers a multi-displinary approach to the treatment of stress, involving specialists from internal medicine, cardiology, psychology, psychiatry, radiology, pathology and occupational medicine.

The Center offers a two-pronged approach to the problem of job-related stress. Program participants first receive a comprehensive physical examination with special emphasis on recognition of stress-related disorders. The physical includes a medical history, blood tests for cholesterol and tryglyceride levels, urinalysis, electrocardiogram and complete treadmill testing to spot potential cardiovascular problems.

The tests are followed by a health status review and discussion of risk factors in an individual's life related to health. The Executive Wellness Center is co-directed by Dr. Deane Shapiro, Associate Professor of Psychiatry and Dr. Sophocles N. Panagon, Assistant Clinical Professor of Medicine. It is located at the Centerpointe Business Complex at 19722 MacArthur Boulevard, Irvine. For more information, individuals and corporations can call 714/856-1070.