The Newsletter of
THE AMERICAN INSTITUTE OF
STRESS

Number 3, 1988

Stress Reduction Effects Of Laughing

Ever since Norman Cousins recounted the therapeutic effects of a good belly laugh in *Anatomy of An Illness*, humor therapy seems to have taken off, particularly with respect to relieving stress. Its popularity is attested to by attendance at conferences dealing with this subject as well as its growing use by corporations to combat job stress. Faced with massive layoffs, Owens-Corning decided to use a stress reduction "humor consultant" to alleviate the stress of potential job termination for some 2000 employees with gratifying results according to a recent Wall Street Journal article. This was not an isolated assignment judging from the 150 other workshops on this particular "humor consultant's" schedule for this year with anticipated billings of $300,000. There is an organization devoted solely to this subject which publishes a quarterly magazine entitled *Laughing Matters* which has generated "rave reviews" from subscribers in fifteen countries and a variety of physicians now specialize in humor therapy. The Institute for the Advancement of Human Behavior recently sponsored a four-day conference on *The Power of Laughter and Play* which included a special event entitled *"Healing Entertainers and Entertaining Healers."* It featured comics Sid Caesar and Steve Allen, as well as their physician sons who teach juggling, and other "feel happy" techniques to their patients and clients. A good belly laugh is viewed by some as akin to "internal jogging" which allegedly results in beneficial physiologic effects on the circulation and central nervous system. There is also some suggestion that laughter and other "positive" emotions may help improve immune defenses against certain viral linked disorders. For centuries, many royal families were apparently similarly impressed with the salubrious effects of humor, often including court jesters or their counterparts in their entourage. Perhaps they were on to something. Even the Bible says "A merry heart doeth good like a medicine."

ALSO INCLUDED IN THIS ISSUE

Computerized Stress Therapy?

Computers have long been used as tools for psychological assessment of anxiety, depression, anger, loneliness and other stress-related states. Now they are being utilized therapeutically to assist in the treatment of specific stressful problems related to marital discord, parent-child conflicts, job stress and agoraphobia. Using an interactive format where the patient responds to specific questions that then generate subsequent appropriate inquiries, computer programs are increasingly able to reach diagnostic conclusions, offer therapeutic suggestions and evaluate their results on the basis of ongoing patient responses. Some programs are

(continued on next page)

For further information on the original source of abstracts and other reprints available on similar subjects, please send a self-addressed stamped envelope to: Reprint Division, American Institute of Stress, 124 Park Avenue, Yonkers, NY 10703.

The Newsletter of THE AMERICAN INSTITUTE OF STRESS NEWSLETTER is published monthly by The American Institute of Stress. Subscription rates: $35.00 annually.

The Newsletter of
THE AMERICAN INSTITUTE OF
STRESS

Paul J. Rosch, M.D., F.A.C.P.
Editor-in-Chief

Computerized Stress Therapy? *(continued from pg. 1)*

designed to be utilized along with a trained therapist to reinforce compliance and add the personal interaction that may play an important role in achieving psychotherapeutic benefits. On the other hand, some individuals actually seem to be more honest and comfortable when responding to confidential computer inquiries as compared to a trained mental health professional's interview. Many successful programs take the patient through a cognitive restructuring procedure based on successive responses to questions carefully designed to ascertain errors in perception of stress or deficiencies in coping. *TLP* (Therapeutic Learning Program) asks questions, and then assigns homework in an attempt to uncover "thinking errors" that trap patients into self-destructive behavior. Used in tandem with a therapist, it is delivered in five two-hour workshop sessions conducted on a weekly basis. One large national HMO now offers *TLP* to its members and results in over 2000 patients are described as producing "beneficial change" in half and "life-altering change" in 15 percent. One therapist with considerable experience in this approach believes that "Seventy-five percent of the people who belong to medical groups could benefit from *TLP*" stating that most people encounter a lot of stress in their day-to-day lives, but often they're not even sure what is *(continued on pg. 7)*

"In an examination those who do not wish to know, ask questions of those who cannot tell." — Sir Walter Raleigh

AIDS and Emotions

The average life span after an AIDS diagnosis is 18 months. Only 20 percent of more than 57,000 AIDS patients nationwide lived three years, and a recent study in New York showed only a 5 percent chance of living longer than five years. As noted in previous issues of this newsletter, the observation that certain types of stress can lower immune system defenses suggests that stress could play a role in the development or clinical course of AIDS. Conversely, stress reduction techniques or good stress in the form, of positive emotions might provide beneficial effects. That premise appears to be supported by a recent newspaper article about a 40-year-old patient diagnosed as having AIDS four years ago who is beating the odds by utilizing such an approach. He gave up his job in crisis intervention with the emotionally handicapped in New York City and moved back to Kansas which he described as a "low stress-low risk area." He works with weights, does aerobics and despite his illness runs two miles every other day. He also meditates regularly and has switched from quick food meals to mostly a macrobiotic diet of fruits, soups and salads. Despite the fact that he's on no medication, lesions from Kaposi's sarcoma which strike most long-term AIDS victims have miraculously disappeared. Now he is looking for a part time job, "something without stress," to get him out of the apartment he shares with a cat and a new lover. The article describes other AIDS patients who have benefited from similar approaches and by participating in workshops and self-help groups which foster a great sense of control

Stress Induced Ulcers in ICU Patients

Selye demonstrated that erosive hemorrhagic lesions in the stomach of his experimental animals was the most pronounced hallmark of the acute response to stress or "Alarm Reaction." In humans, acutely stressful situations such as severe burns are also regularly associated with a high rate of gastrointestinal bleeding due to ulceration. A recent study now confirms a very high incidence of acute erosive gastritis in intensive care unit patients. Eighty-two percent were found to have evidence of such pathology within 48 hours of admission. In another report of patients with burns over 50 percent of their body, almost 100 percent had erosive gastritis. The condition may be unrecognized, however, since active bleeding may not be evident in the vast majority of patients. As a consequence it has been suggested that ICU patients should routinely be put on a prophylactic program to minimize such complications. Standard antacids are often effective and there are a variety of specific acid-inhibiting medications that can be administered intravenously as well as orally.

Sympathetic Nervous System Activity in Hypertension

In men with normal blood pressures, sympathetic nervous system responses appear to increase with age. This does not hold true for those with hypertension. Forearm vascular resistance in mild to moderate hypertensive males over the age of 55 was greater than that of a younger group. However, lower body negative pressure, which activates baroceptors to stimulate sympathetic activity, produced no increase in heart rate or blood pressure in either group despite similar increases in norepinephrine levels which were observed in both. This suggests that heightened sympathetic activity exists in hypertension but is not augmented by this particular physical stimulus. It would be interesting to see if the same holds true for emotionally stressful states that heighten sympathetic responses.

"Friendship has one quality that renders it indissoluble and doubles its delight, a quality that love does not possess: certainty." — Honore de Balzac

The Stress of Holiday Blues

For many individuals, holidays are not necessarily the "season to be jolly." The six weeks between Thanksgiving and New Year's is a psychological hell for many because of anxiety, apprehensions, phobias, stress, guilt and even suicidal tendencies. According to one Harvard psychiatrist, loneliness is a major factor which seems to get blown out of proportion leading to an exaggeration of depression, alcoholic tendencies and guilt feelings, especially during family gatherings when the absence of a close relative stirs up remorseful and painful memories.

Experts suggest that ways to combat this include accepting as many invitations as possible to be around cheerful people who will help absorb feelings of isolation. Avoid high-stress situations whenever possible by thinking about forthcomsing events optimistically and decisive planning to avoid trouble spots. For many, the only solution may be to take a long, restful winter vacation during the holiday season, returning when everything's back to normal. Some individuals also suffer from the SAD (Seasonal Affective Disorder) syndrome due to dimininished exposure to daylight. December 21 is the shortest day of the year and many sufferers benefit from extended exposure to artificial ultraviolet light or travel to southern locales where the day is longer.

"If we had keen vision and feeling of all ordinary human life, it would be like hearing the grass grow and the squirrel's heart beat and we should die of that roar which lies on the other side of silence." — George Eliot

Stress and Mayors

A recent three-day meeting in Washington of the U.S. Conference of Mayors began with a session on mayors and stress, hosted by T.V.'s Good Morning America consultant physician. Interest in the subject was sparked by the sudden death of Chicago's mayor Harold Washington. Ulcers, tension headache and indigestion mere major mayoral stress complaints. The mayor of Knoxville, Tenn., noted that what stressed him the most was "when I ask that something be done and I discover later that it wasn't." Gary, Indiana's leader complained of "16- and 17-hour days. The work is unlimited. It just never ends." And the conference director noted "A mayor is the most scrutinized person on the globe, even in small towns."

Stress Reduction Effects Of Confession

It has long been held that "confession is good for the soul." Now it appears that it may provide benefits for the body as well. According to some, supressing or inhibiting behavior, thoughts, or feelings can result in measurable physiological consequences which may ultimately predispose to physical illness. In one recent experiment subjects were asked to discuss stressful life events as well as what they planned to do after the study was over. Half of the group were isolated in experimental cubicles and talked into a tape recorder. The remaining subjects talked to a silent "confessor" who sat behind a curtain. Skin conductance, blood pressure and heart rate were continually measured and judges rated the subjects' depth of disclosure so that "high" and "low" disclosers could be separated. The high disclosers who could more readily discuss stressful traumatic events and future plans demonstrated decreased behavioral inhibition as assessed by lower skin conduction levels. They were also more emotionally expressive than low disclosers and more aware of unpleasant moods, physical symptoms and thoughts. Low disclosers tended to repress negative emotions and avoided discussing or even thinking about them. The researchers postulated that these differences in psychophysiologic reactivity may have other cardiovascular correlates and that such repetitive or sustained responses may predispose to physical illness.

Further Support for Hassles As a Predictor of Stress Related Illness

Both the Life Change Event scale and the Hassles Index are instruments utilized to measure stressful events that can predict future illness patterns. The original Hassles Index was developed in a predominantly white, middle-class community sample. Since stressful hassles might be different in other demomographic groups, a similar study was done in a population of elderly, low-income individuals with osteoarthritis utilizing a modified and more pertinent hassles questionnaire. The researchers again demonstrated that hassles correlated strongly with recognized indicators of health status and had greater predictive power than Life Change Event scores. They postulated that life change events might primarily influence health indirectly, by increasing the number of hassles having adverse consequences. It was suggested that if specific clusters of hassles can be correlated with poor health outcomes for a specific disease or population then it might be possible to develop intervention strategies to provide appropriate coping resources.

The Health Benefits of Caring for Living Things

The pet-health link has been well established for relationships with dogs, cats, birds, mammals, reptiles, aquarium fish and horses. A prominent researcher in this field also suggests that similar benefits may extend to individuals who care for their gardens, farmers actively tending their crops, 4-H children with pet animals, as well as bird watchers and wild bird feeders. As society has become more industrialized and urbanized and agriculture increasingly mechanized, the potential for such activities appears to be declining. It is postulated that such contact with the natural world plays an essential but unappreciated role in human development. Infants who are deprived of touch fail to thrive or develop normally and the healing benefits of touch therapy in adult patients is well recognized. Nurturing and caring seem to induce or be associated with significant psychologic and physiologic responses that have beneficial health repercussions. Conversely, social isolation, bereavement, an inability to care for others and lack of zest for work and daily activities are associated with increased susceptibility to illness, depression, and loneliness. Caring for and looking after other living things, regardless of whether they are people, pets or plants seems to provide a powerful buffer against such problems by somehow promoting the healing ways of nature (vis medicatrix naturae).

Lobsters and the Power of Caring

According to a recent Philadelphia news article, "a 25-pound lobster that nearly became somebody's Easter dinner will be jetting to Maine to live out its old age beneath the Atlantic." Estimated to be between 40 and 125 years old, "with claws the size of baseball mitts" the lobster together with a 20-pound companion were shipped by mistake from Boston to a local fish store and subsequently were to be sold to a regular customer for $287. However, following a newspaper article about this transaction, the store was flooded by protesting phone calls from lobster lovers, including an official of the animal rights group Pity not Cruelty. She told the owner that it would be a "lovely gesture during the Passover and Easter holidays to celebrate themes of freedom and resurrection by buying back the lobsters" and even offered to up the ante. After a number of similar calls the fish store persuaded the customer to exchange the lobsters for 45 pounds of smaller ones. In the meantime, the rights organization made arrangements with the Maine Department of Marine Resources to have both lobsters crated and covered with seaweed so that they could be flown to Portland and then freed off the shore of Cape Elizabeth. In Maine, it would be illegal to catch lobsters this size since there is a five-inch maximum length (from the rear of the eye socket to the end of the body shell). Unlike humans, older lobsters are protected because they have more offspring. Apparently lobsters will have to be added to the large list of items for caregivers noted above.

"It is remarkable that one characteristic which seems to separate man from the allegedly lower animals, is a recurring desire to escape from reality."

— C.H.W. Horne and J.A.W. McCluskie

Hypertension and the Holocaust

A study of the survivors of the Holocaust revealed no increaed incidence of hypertension despite the fact that they reported more emotional distress than a control group. Blood pressures were compared in over 2000 European-born Israelis who had emigrated to Israel after World War II and more than a thousand who had left Europe prior to 1939. There was no difference in the prevalence of hypertension in the two groups, all of whom were between the ages of fifty and eighty. Age, sex and obesity were the main factors contributing to hypertension in both groups.

Anger and Illness

In recent years it has been suggested that the degree of expression and suppression of anger as well as hostility ratings may represent the most significant predictive components of type A behavior for cardiovascular disease. Further support for this comes from a national study of some thirteen hundred black adults. Researchers found that those who reported high levels of expressed anger in response to severe episodes of emotional stress also had more physician-diagnosed health problems than those with low or moderate anger expression capabilities. This relationship between health and anger was not influenced by age, sex, urban environment or evidence of smoking or drinking problems. Expression of anger had the greatest association with adverse health problems in those who were unemployed.

"Man is the only animal that laughs and weeps; for he is the only animal that is struck with the difference between what things are, and what they ought to be."
— Hazlett

Stress Management and the Treatment of Essential Hypertension

The most recent national recommendations for the treatment of hypertension emphasize that non-drug approaches should be the first step. The significant prevalence of "white coat" hypertension and ambulatory blood pressure measurements which reveal that the highest blood pressures are seen in individuals while talking on the telephone at work about stressful subjects, suggest that stress plays an important role in many cases of "essential" hypertension. This is supported by the beneficial results reported with stress reduction techniques such as the Relaxation Response and other strategies designed to reduce somatic responses to stressful external stimuli. Regular jogging and aerobic exercise, progressive muscular relaxation techniques, and psychotherapeutic approaches have also been utilized to reduce stress-related hypertension with conflicting results reported in the literature. In many instances, proof of benefit has been difficult to establish because of the lack of an adequate control group, prompting a recent Canadian study which specifically addressed this important issue.

Thirty-two individuals of both sexes between the ages of 34-65 with diastolic blood pressures between 90-109 and systolic levels under 200 were randomly allocated to receive either a combined program of relaxation and stress management compared to a control group performing only mild physical activity. The participants were carefully selected to exclude possible confounding influences such as the presence of other physical or mental disorders or concurrent administrtion of interfering medications such as oral contraceptives. Basal blood pressures were established after a minimum of three visits to a general practitioner, and were confirmed by a nurse on entry into the study. The treatment group engaged in ten, one hour weekly sessions, during which they met individually with the therapists. This included educational information concerning stress and its effects on the cardiovascular system followed by training in relaxation, skin resistance, biofeedback information, as well as how to apply stress management techniques in everyday life, much along the lines of the treatment program developed by Patel. The control group also met for ten hourly sessions, received the same information about stress and hypertension, but only performed very mild "warm up" exercises involving mobility and flexion. Blood pressures were recorded on several occasions at the time of referral, during the baseline survey, at each treatment appointment, and at the end of follow-up. In addition, participants recorded their blood pressures daily at home in the morning and in the evening throughout the 8-1/2 months study being careful to avoid any possible influence from meals, coffee, cigarette smoking, etc.

The results of the study clearly showed that those participants who practiced relaxation and stress management techniques showed a greater reduction in pressure than controls. This was true for diastolic pressure immediately, and both systolic and diastolic pressure three months into the study. Interestingly enough, home blood pressure readings did not show any significant statistical change possibly because they were already lower to begin with so that any further improvement would have been minimized. In addition, mood state assessment questionnaires which were completed for five consecutive days prior to treatment and five consecutive days after treatment showed relatively little change or differences between the two groups. However, pretreatment scores were also low, suggesting little emotional distress as assessed by this particular psychometric test which may have restricted the scope for change. There was no significant change in cardiovascular reactivity confirming prior reports which failed to show improvement in response to cold pressor tests, dynamic exercise, or other stressors as a result of stress reduction measures. However, the findings did confirm the efficacy of this particular stress reduction approach in treating hypertension.

Type A Behavior and Health In Children and Adolescents

The relationship between Type A behavior and health was studied in fifth-, seventh-, and riinth-grade students. Type A behavior was measured by the student Type A behavior scale as well as a modified structured interview. The students also were given other health-related questionnaries dealing with symptoms, family history, etc. and had a physical examination. No significant differences were found between high and low type A behavior subjects with respect to absenteeism from school or use of physician services. However, high Type As reported significantly more physical symptoms than those at the lower end of the scale and self ratings of stress intensity were also significantly greater for the high Type As. Consistent with findings in other health surveys, girls had many more physical complaints than boys on every measure of symptom report. However, in this study they did not miss school any more frequently because of illness. Utilization of health care services was identical for both high and low Type A females.

Stress in Communication Workers

"If the economy continues its shift into information processing, finance, and services, and if the working conditions in those sectors remain what they are today, stress is likely to become the single largest cause of occupational illness and injury into the next century." That was the lead quote in an article entitled *"Stress: Symptoms and Solutions"* for the Communications Workers of America AFL-CIO in April. The article began by noting "The myth that working in an office is safer than working in a mine shaft has gone the way of the manual typewriter. The office can be just as hazardous to your health as the traditional smoke-stack factory, sweatshop or mine shaft. Occupational stress is the primary reason."

In support of this contention it was noted that "stress now accounts for 14 percent of occupational disease claims, according to the National Council on Compensation Insurance," and that the National Institute on Occupational Safety and Health reports that "one in five American workers is afflicted with a major psychological work-related disorder." Furthermore, these problems are most prevalent in the prime working ages of 25-44 years and are much more costly in terms of loss of productivity and compensation awards. Job stress "was a key reason workers joined together and formed CWA" according to the report, noting that over 200 work stoppages in Washington, D.C., occurred in 1945 alone, mainly because of stressful working conditions. A few years prior to that, telephone operators had to put up with tubs of ice and fans rather than air conditioners, tools for craft workers were frequently unsafe, and there was constant monitoring of activities. With technological advances, offices now "are becoming factories with rows of workers connected to video display terminals that are capable of monitoring every key punched." A report issued by the Congressional Office of Technology Assessment reveals that over six million American workers are being monitored by computer each year. As a result, the environment is "more like a prison than a worksite," according to the CWA president.

One North Carolina study indicated that reports of chest pain were increased by 100% in video display terminal operators when compared to control non-users and that the frequency and severity of such complaints were directly correlated with greater VDT use. In many ways, modern office stress is similar to that seen in factories years ago because they have become modern electronic assembly lines. Other sources of stress are more unique and relate to more subtle factors such as increased workload, lack of appreciation of effort, eye and muscular problems related to continual VDT exposure, lack of control, and annoying or hazardous working conditions that produce effects similar to exposure to the "whirring, pounding and drilling of the factory and coal mine." The article goes on to point out the signs and symptoms of stress and what workers and union affiliates can do about it. A variety of innovative and effective programs have been developed by various affiliates with great success. The report concluded with the observation that "Stress in the workplace is on the rise and there is no magic answer for every case. Each local union needs to develop programs or strategies suited to its own conditions."

"Her pure and eloquent blood spoke in her cheeks, and so distinctly wrought, that one might almost say, her body thought." — John Donne

Stress, Farmers and Alcohol

In urban areas, the constant stress of life in the fast lane could obviously drive many to drink. Therefore, one might suspect that alcohol abuse would be greater here than in more tranquil rural locales. Not so, according to a recent North Carolina study of 4,000 people. They discovered that the rate of alcohol abuse or dependence was 4.2 percent in four rural counties but only 2.6% in urban Durham County. The researchers commented that "While this is not a dramatic difference we were surprised at the direction of this statistical trend."

Circadian Cardiovascular Rhythms

A variety of recent reports suggest that heart attacks, strokes, sudden death and even transient angina are most likely to occur in the period from 6 A.M. to noon than other times of the day. Prior appreciation of this was hampered by the fact that many patients delayed reporting the onset of pain or other symptoms since a heart attack that began at 2 A.M. might not have been appreciated by the patient until awakening four or five hours later. New studies which objectively measured changes in cardiac enzyme activity released during heart injury in over 700 patients confirm that three times as many heart attacks occurred in the period between 9 and 10 A.M. as compared to 11 P.M. and midnight. Another survey of over 2000 cases of sudden death showed a similar pattern and neurologists have long been aware that the onset of strokes is greater in the latter half of the morning. Similarly, ambulatory cardiac monitoring also confirms that both anginal and asymptomatic ischemic ECG changes are maximal during this period.
Possible explanations include the sudden surge in arterial pressure which occurs on awakening that may rupture an existing coronary atherosclerotic lesion, or an increase in coronary arterial tone which may further compromise a critical vascular stenosis decreasing the flow of blood and contributing to ischemia and thrombosis. The process of waking up is also associated with greater levels of stress-related hormones like adrenalin and cortisone which cause platelet clumping and contribute to increased blood clotting tendencies by other mechanisms that affect coagulation. These observations may have important clinical application in terms of the timing of administration of drugs such as beta blockers, calcium antagonists, long-acting coronary vasodilating nitrates, and aspirin, by insuring maximal protection against early morning increased coronary spasm and clotting tendencies.

Computerized Stress Therapy? *(continued from page 2)*

bothering them. And the majority of these people resist any suggestion that they have a mental problem. In other words, they won't see a "shrink." However, another psychiatrist doubts that computers will ever provide any benefits for patients with serious mental problems or psychotics since "The single most important factor in psychotherapy is the relationship with another human being." He believes it is important at the outset to distinguish between serious, moderate and trivial complaints, noting that "Trouble getting a date is not a psychiatric problem."

Is Black Hypertension Due to Stress?

Twice as many blacks as whites in America have hypertension that responds to salt restriction or is aggravated by salt loading. This genetic susceptibility is thought by some to have its origins in conditions aboard slave ships that operated between Africa and the New World for over three centuries. Of the up to 40 million blacks who were captured in Africa during the 350 years of slave trading, only 11 million survived the voyage to this continent because of a shipboard mortality that approached 50%. Researchers suggest that those who survived did so because they were best able to survive the dehydration and salt-poor diet to which slaves were subjected. Salt sensitivity in blacks may have resulted from thousands of years of evolution in the hot African climate where increased salt and water retention were essential for survival. Because of the ravages of the slave trade, those who survived may have had greater ability to retain salt. While this may have provided certain benefits at the time, it has now become a disadvanatage for many.

Special Notice

The American Institute of Stress is sponsoring the First International Congress on Stress in Montreux, Switzerland, November 30-December 4, 1988. Leading experts from the United States and around the world will present state of the art information on Stress and Cardiovascular Disease (hypertension, coronary heart disease, sudden death, type A), Stress and Immune System function, (AIDS, Cancer), Job Stress (sources, signs and symptoms, solutions), Stress Reduction Techniques and Stress Management Training, Stress Assessment Methodologies, as well as the role of back pain, etc. A particularly interesting segment co-sponsored by biobehavioral effects of electromagnetic energy and the unique role of electrical energies in medical diagnosis and treatment. Novel diagnostic and therapeutic instrumentation and devices which are useful in managing anxiety, insomnia, pain and other stress-related complaints will be exhibited. Many of these are currrently not yet available in the United States. For further information on reduced rates write to the American Insitute of Stress of call 1-888 24RELAX.

Book Reviews • Meetings and Items of Interest

Book Reviews

Assessment of the Human Stress Response. Everly, G.S. and Sobelman, S.A. STRESS IN MODERN SOCIETY Number 4. AMS Press, New York, 1987. 134 pp. $18.00

This is a very useful concise contribution that lives up to the promise of its title. It reviews the various multidisciplinary approaches that have been developed to measure stress, carefully pointing out the pros and cons of different assessment techniques. There is a particularly valuable chapter entitled Basic Concepts in Measurement which explains how to evaluate the experimental design, determine reliability and validity, distinguish between state and trait assessment and allow for the importance of individual differences in physiological research by utilizing Wilder's law of initial value. There is ample discussion of psychophysiologic and neuroendocrine responses to stress, the application of measurement techniques for various stress related hormones, and the important effect of confounding or interfering influences. References are complete and up to date and provide a valuable resource for further background information on the issues discussed. Highly recommended for anyone involved in stress research.

Stress and Sexuality. Greenberg, S.J. STRESS IN MODERN SOCIETY Number 6, AMS Press, New York, 1987. 180 pp. $18.00

This is another volume in the AMS series "STRESS IN MODERN SOCIETY" but falls far short of the standards set by other contributions such as that noted above. There is absolutely no background information about the author so that it's impossible to determine his background, credentials or orientation. Some of the statements made are clearly inaccurate such as those who learn stress management skills often show a more extreme response to a stressor than others but return to their resting state sooner, much like joggers whose heart rate increases tremendously when they exercise but returns to normal sooner than those out of shape. There is a rather sophomoric approach to measuring stress reactivity which suggests that this may be accomplished simply by closing your eyes and imagining a stressful event. Sexuality is defined and categorized in terms of cultural, biological, psychological and ethical components. Treatment of various sexual problems is discussed including premature ejaculation, frigidity, dyspareunia, vaginismus, etc. There is also a discussion of distinctive characteristics of different types of marriages, which while interesting, contributes little to the purpose of the volume. The section on endocrine responses to stress is deficient in several areas and surprisingly has no discussion on the effects of stress on gonadal functions, FSH, LH, etc. References are poor and mostly outdated, and the indexing is scanty. Testosterone, amenorrhea, and infertility are not even included although these are among the most important effects of stress on sexual function. This monograph has an appealing title, but unfortunately illustrates the old adage that "you can't judge a book by its cover."

Meetings and Items of Interest

May 14-21, Healing the Heart-Includes thorough discussion diagnosis and treatment of Type A Coronary Prone Behavior, Psychosocial Aspects of Cardiovascular Disease, (A. Friedman, J.J. Lynch & others). Boston, MA., Theoria Associates, (203) 456-6000.

May 21-27, Mind and Nature: World Conference for the Future of Human Civilization, Hanover, West Germany. (Sir John Eccles, Ilya Prigogine, R.D. Laing and others, (212) 744-8310, (213) 854-0093.

May 26-30, The Association for Behavior Analysis-14th Annual Convention, Philadelphia, PA. (616) 383-1629.

June 9-10, Occupation and Environmental Medicine, Sacramento, CA. Office of CME UC Davis School of Medicine, 2701 Stockton Blvd., Sacramento 95817.

June 26-July 1, Neuroimmunomodulation, Copper Mountain, CO., Federation of American Societies for Experimental Biology, (301) 530-7093

July 3-8, Ultradian and Infradian Modulation of the Circadian System, Copper Mountain, CO., Federation of American Societies for Experimental Biology, (301) 530-7093

July 11-14, The Role of Exercise and Nutrition in Preventive Medicine, Crested Butte, MO., ISC Division of Wellness, (813) 686-8936.

July 22-24, Depression-Psychobiology, Psychodynamics and Therapy, Harvard Medical School, Department of Continuing Education, Boston, MA 02115.

Oct. 13-15, Psychobiology of Human Eating Disorders, New York, NY, New York Academy of Sciences, (212) 838-0230.

Nov. 17-20, 35th Annual Meeting of the Academy of Psychosomatic Medicine. New Orleans, LA. (312) 784-20-25.

Nov. 30-Dec. 4, First International Congress on Stress, Montreux, Switzerland. Contact American Institute of Stress, 1-800-24 RELAX in NY (914) 963-1200.

The Newsletter of
THE AMERICAN INSTITUTE OF
STRESS
124 Park Ave., Yonkers, New York 10703

Non-Profit Organization
U.S. Postage
PAID
Yonkers, NY
Permit No. 400