

The Newsletter of THE AMERICAN INSTITUTE OF STRESS

Volume 3 Number 1, 1990

In response to a number of requests, we will be devoting certain issues of the Newsletter to specific topics. The format will include an introductory general overview followed by summary articles reporting on recent relevant research reports. This issue focuses on *Stress and Hypertension*.

Stress and Hypertension

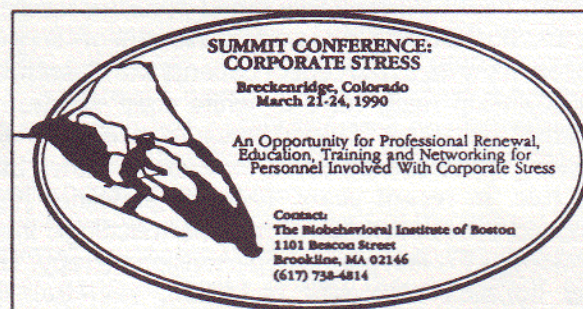
For many lay individuals, the terms stress and hypertension are almost synonymous. It seems clear that anger and similar emotions can cause a marked elevation of blood pressure or, if things "boil over," maybe even a stroke. Acutely stressful situations are accompanied by increased sympathetic activity and hormones like adrenaline and noradrenaline as part of the 'fight or flight response' which causes a rise in blood pressure. However, there is no proof that such intermittent elevations lead to sustained hypertension, or that patients who exhibit dramatic stress-related blood pressure elevations are at any greater risk than those with minimal responses. Essential hypertension is not a disease, but rather a marker, much like an elevated blood count or fever. All of these can have many different causes and require very different therapeutic approaches. Thus, while salt restriction has traditionally been the first thing that physicians advise their hypertensive patients, there is increasing evidence that this is not always beneficial. Indeed, strict sodium restriction limits the intake of dairy products which may have adverse effects since it also reduces calcium intake which may be a more important cause of hypertension in many individuals.

In one recent study, individuals with borderline hypertension and normotensive controls were placed on a low sodium, followed by a high sodium diet. Heart rate, blood pressure, plasma norepinephrin, and muscle sympathetic nerve activity were measured. Hypertensive individuals demonstrated significantly greater muscle sympathetic nerve activity than controls regardless of sodium intake. Diet had little effect on systolic and diastolic pressures in either group. Interestingly enough, high sodium intake *suppressed* sympathetic nerve activity in both groups.

Thus, it seems clear that increased central sympathetic outflow in borderline hypertensives is not related to dietary sodium intake. Padoxically, the high sodium diet actually reduced sympathetic activity in both groups. The practical significance of this is not clear.

ALSO INCLUDED IN THIS ISSUE

Non-Drug Treatment of Hypertension	2
IBM Job Cuts Sign of 'Stress'	2
Which Stress Reduction Technique Is Best	
For Hypertension?	3
Did Darwin Die from Stress of Chagas' Disease.....	3
Jet Noise Exposure and Mortality	4
New Gallup Poll Confirms That Stress	
Is Costing Billions	4
Stress and the Skin	4
Is Wham-It the Answer to Our Ills?	5
Biofeedback for Hypertension —	
When Does It Work?	5
New Form of Post-Traumatic Stress Disorder	6
Stress and Multiple Sclerosis	6
How Does Stress Contribute to Heart Attacks?	7
2nd Annual Less Stress Golf Tournament	
A Huge Success	7



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. Copyright© 1987 by The American Institute of Stress. All rights reserved.

The Newsletter of
**THE AMERICAN INSTITUTE OF
 STRESS**

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

**Contributing Editors from The Board of Trustees of
 The American Institute of Stress**

Robert Ader, Ph.D., Rochester, NY
Herbert Benson, M.D., Boston, MA
Norman Cousins, Los Angeles, CA
Michael E. DeBakey, M.D., Houston, TX
Joel Elkes, M.D., Louisville, KY
John Laragh, M.D., New York, NY
James J. Lynch, Ph.D., Baltimore, MD
Kenneth R. Pelletier, Ph.D., M.D., Berkeley, CA
Ray H. Rosenman, M.D., Menlo Park, CA
Charles F. Stroebe, Ph.D., M.D., Hartford, CT
Alvin Toffler, New York, NY
Sue Thomas, RN, Ph.D., Baltimore, MD

Non-Drug Treatment of Hypertension

A great deal of evidence suggests that a significant percentage of patients currently on drug treatment for hypertension do not require such medications which can be sharply reduced or discontinued without any adverse effects. Some studies report that vigorous antihypertensive therapy, especially in the elderly, may actually be associated with a greater risk of mortality from myocardial infarction. Some commonly used antihypertensive drugs (diuretics) may cause potassium depletion, predisposing the patient to serious disturbances in heart rhythms or even sudden death. Ambulatory blood pressure monitoring and home blood pressure measurements suggest that as many as 15 percent of patients with "essential" hypertension really have a "white coat" syndrome, and that elevations of blood pressure recorded in the doctor's office are transient exceptions rather than the rule. In recent years, national guidelines have stressed the importance of nonpharmacologic interventions as the first step in hypertension therapy. This may consist of weight reduction, exercise, salt restriction, calcium supplementation, and various techniques designed to reduce "stress."

A recent two-year study in Sweden examined 400 hypertensive men and women between the ages of 30 and 69. In half of these, drugs were reduced or withdrawn during the first year according to a pre-arranged schedule. Starting with the second year, the patients received dietary instructions, increased physical activity, and stress management instruction. The second group of 200 people were withdrawn from medication on the same schedule but these non-drug

approaches were started at the beginning. Blood pressures were taken monthly by a nurse and the patients also did home measurements daily. After 24 months, 42.7% in group 1, and 46.4% in group 2 had been successfully weaned from all medication. Of interest, was the incidental observation that serum triglycerides were also appreciably lowered in both groups by the end of the second year. The most impressive finding was that of a significantly improved quality of life as a consequence of stopping medication in both groups. Those patients with the highest pressures did just as well as the others suggesting that such non-pharmacologic approaches can be effective in all hypertensives, and not only those with borderline or mild elevations. It is estimated that almost one-third of hypertensive patients can probably achieve sustained normal levels of blood pressure by utilizing these techniques based on home measurements, rather than those obtained in the office setting.

"The greatest discovery in our generation is that human beings by changing the inner attitudes of their minds can change the outer aspects of their lives."

— William James

IBM Job Cuts Sign of 'Stress'

That was the title of a recent *USA Today* article which further stated that Big Blue "joined others in an industry 'under stress' with plans to eliminate 10,000 jobs in the USA." Talking to analysts about future plans, the CEO added that "turmoil" might best describe the state of the computer industry. It was noted that in the preceding three months, IBM's rivals had eliminated more than 24,000 jobs due to the steady decline in U.S. demand for main frame and mini computers. They may not have gone far enough according to a former regional sales manager who was quoted as stating that it "should cut 50,000 to 70,000 more to get its house in order." Even more pessimistic was a fund manager whose advice was that "everybody who owns IBM stock should sell it immediately."

"Men go abroad to wonder at the height of mountains, at the huge waves of the sea, at the long courses of the rivers, at the vast compass of the ocean, at the circular motion of the stars; and they pass by themselves without wondering."

— Saint Augustine

Which Stress Reduction Technique Is Best For Hypertension?

Stress is a highly personalized phenomenon and thus, difficult to define objectively. What is distressful for some individuals may be pleasurable for others or alternatively have little significance either way. It would seem to follow, therefore, that there is no stress reduction approach that will prove to be a panacea for everyone. Running and aerobic exercise are effective for some individuals, but dull and boring and even stressful for others. The same may be said for meditation, yoga, progressive muscular relaxation and other autogenic training techniques. Thus, for the hypertensive patient anxious to pursue a non-drug regimen which incorporates stress reduction, it may be difficult to select the best approach.

One recent study compared two such behavioral techniques. One involved cognitive group therapy for anger control and the other utilized biofeedback therapy designed to regulate heart rate. Twenty patients with essential hypertension were randomly assigned to a control group receiving no specific therapy other than educational lectures. Forty patients received cognitive group treatment over 17 weekly sessions designed to improve their ability to express anger, while a similar group began a biofeedback program designed to lower heart rate. After a little more than four months, there was no significant fall in systolic blood pressure in the control group and actually a small rise in diastolic pressure. The anger control group, however, demonstrated a drop in mean systolic blood pressure of more than 17 mm Hg and a diastolic decline of 11.5. The biofeedback group showed a 27 mm Hg average lowering of systolic pressures with a 15.4 mm fall in diastolic measurements. As evaluated by the Multidimensional Anger Inventory, the cognitive therapy group achieved better control of general anger and "anger out" compared to the others and the biofeedback group also demonstrated a superior ability to control heart rate, indicating that the desired interventions had been successful. 40% of the patients in the cognitive therapy group and 54% of those receiving biofeedback had normalized their pressures and manifested a decrease of at least 10 mm Hg. Thus, both stress reduction approaches provided benefits.

In terms of cost effectiveness, it should be noted that clinical experience confirms that salt restriction may be of value for some patients, but provides no benefits for others. The same may be said for calcium supplementation as well as different anti-hypertensive drugs. Determining the best dietary advice or medication for any given patient may possibly be facilitated by renin profiling, experience

based on certain demographics (age, sex, race), and psychological or emotional characteristics. It is more likely that an algorithm utilizing all of these and other relevant parameters may eventually be the best way to hone in on the optimal treatment program for any particular patient.

"We all worry about the population explosion — but we don't worry about it at the right time."

— Arthur Hoppe

Did Darwin Die from Stress or Chagas' Disease?

It has been suggested that Charles Darwin may have died from Chagas' Disease, a parasitic infection found in South America. It is believed that Charles Darwin contracted the trypanosome parasite that causes Chagas' Disease during the voyage of the Beagle to South America. Darwin's health appeared to decline fairly rapidly after he returned to England from the Beagle expedition. Acute Chagas' Disease is fairly benign and 90% or more of the patients recover completely. The chronic form may be more serious and is characterized by disturbances in the heart and gastrointestinal tract. While Darwin did have some complaints in these areas, they are not the symptoms usually seen in Chagas' Disease or trypanosomiasis.

According to a physician who has written a book on the subject, Darwin showed symptoms of his illness before the Beagle voyage and could have had only a very brief exposure to the trypanosome parasite. In addition, the time of onset of his symptoms is not consistent with the latent period of this presumed exposure. As noted in his book, he wrote in a letter to The New York Times that "a main cause of Darwin's illness was stress, especially stresses arising out of the very great difficulties of proving his evolutionary theory of natural selection. His illness first became horrible about the time he originated his theory; it often exacerbated when the difficulties and/or public controversy about his theory were severe, but when he withdrew from controversy, his illness abated."

"It is when we try to grapple with another man's intimate need that we perceive how incomprehensible, wavering and misty are the beings that share with us the sight of the stars and the warmth of the sun."

— Joseph Conrad

Jet Noise Exposure And Mortality

A number of municipalities are concerned about airport expansion plans, citing jet noise problems ranging from hearing difficulties and cardiovascular disorders to environmental pollution and numerous psychosocial problems. One recent report suggests that living under high levels of jet noise is associated with an increased death rate in older individuals. The health records of residents living under one of the flight patterns of planes using Los Angeles International Airport were compared with those living in a contiguous area where jet noise was apparent, but under the 90 db range that characterized exposure to flights in the study group. When projected and observed death rates were compared, it was found that deaths due to cardiovascular disease over an eight-year period were 18 percent higher than anticipated in those over the age of 75 in the jet noise group. Suicides in the high noise area showed a 100% increase for individuals in the 45-54 age group and violent deaths, including suicide, were increased 60% in individuals over the age of 75. Similar trends were evident in other age groups but were not statistically significant. However, it was noted that if the figures for mortality due to cardiovascular disease and suicide were combined in this elderly category, an average of 25 deaths per year could be attributed to jet noise in the test area. That number is probably deceptively low because of the rapid turnover of residences in both the test and control areas reflected in school attendance records. It is quite likely that the adverse health effects cited are "even more dramatic" because they were produced after exposure to jet noise over a relatively short time period.

"Angels can fly because they take themselves lightly."

— G.K. Chesterton

New Gallup Poll Confirms That Stress Is Costing Billions

According to the latest Gallup poll, "stress causes the average American worker to miss more than three weeks a year from performing job duties." The problem is more widespread than generally appreciated, and three out of four corporate medical directors and human resources managers surveyed described the problem as significantly "pervasive." Occupational disability due to job stress-related mental problems costs an average \$8,000 per patient, according to one NIMH authority. It has been predicted that if current trends continue, job

stress problems will dominate Worker's Compensation complaints and awards in the 1990's. Almost half of those surveyed reported that job stress had significantly contributed to diminished productivity and employee morale, with a third suggesting that it had been a major factor leading to alcoholism and drug addiction. A surprisingly large number of employees suffer stress-related symptoms such as difficulty in concentration, insomnia and other associated sleep complaints, lack of energy, and diminished interest in their work because of significant and often unrecognized depression. Some innovative employers have attempted to address this issue by encouraging early detection and treatment of depression. One of the most notable changes has been a shift from in-patient mental health care treatment to providing for prophylactic out-patient diagnostic and therapeutic approaches. The most commonly reported sources of job stress were related to layoffs and plant closings, or fears of such possibilities. This was more apparent in larger companies (4,000-15,000 employees). Such organizations were also more apt to report job stress as being a major problem than smaller companies.

"Stress is really an integral part of life. We set our whole pattern of life by our stress end-point. If we hit it exactly we live dynamic, purposeful, useful, happy lives. If we go over, we break. If we stay too far under, we vegetate."

— Dr. Howard A. Rusk

Stress and the Skin

Acne and other skin problems often seem to flare up during periods of emotional distress. The skin is the largest organ of the body and one of the greatest mirrors of stress. Rashes, itching, blushing, pallor, hives, acne, etc., are common illustrations of these close relationships between stress and dermatologic disorders. New studies utilizing live skin samples reveal that a protein released by nerve fibers can cause disease-fighting white cells to accumulate in the skin, causing inflammation of the type seen in acne and similar problems. As the researchers note, it has long been appreciated that "emotional distress can lead to skin flare-ups." It is believed that cells controlled by the central nervous system may regulate the "doorman" for letting inflammatory cells in and out and may also provide clues for the treatment of inflammatory disorders of the lung and stomach.

"It is by universal misunderstanding that all agree. For if, by ill luck, people understood each other, they would never agree."

— C. Baudelaire

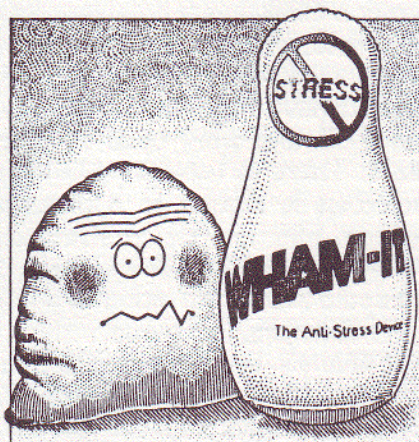
Is Wham-It the Answer To Our Ills?

The following is excerpted from the December 20, 1989 issue of the Wall Street Journal:

Stress relief is a hot theme this year. That means record sales for Wham-It, an inflatable punching bag that was introduced in 1986. The popular desk-top model sells for about \$10. "Stress is the major mental health issue of the 1980s," contends Jack Behlmer, Wham-It's creator and president of Creative Imaginations Inc., of Costa Mesa, Calif. He claims to have sold 1.2 million Wham-Its to date.

Shoppers will find endless variations on the stress theme: Rx Freud balls that emit either an electronic scream or laugh when touched. Small leather bats and sponge bricks that give off a sound like shattering glass when thrown against a hard surface.

Even Bloomingdale's is cashing in on the trend. Its Chicago store boasts an assortment of pricey anti-stress toys. Among them is the \$25 O-No Worry talking pillow that launches into a litany of anxieties when squeezed. "No, Oh, worry, worry, worry," the pillow's electronic voice whines. "Money. My boss. My mother-in-law. Oh, no. The tax man. Bills. Bills. Bills. Oh, no. The stock market. Oh worry, worry, worry."



*O-No Worry Talking Pillow
And Wham-It Punching Bag*

In addition, you can purchase Referee, a soft doll dressed in black-and-white striped shirt, accessorized by cap and whistle. The head, arms and legs are attached by Velcro, so "the minute your team gets a bum call, you'll be able to ease your frustration by literally tearing your beer-bellied zebra apart."

The Rx Freud line also offers Paddleball, a clear acrylic paddle with a drawing of Dr. Sigmund Freud on its face — "so you can bounce the ball in his face." And there is "pillow talk," with a soft version of Freud's head and shoulders and a voice box embedded inside. In a strong Viennese accent, the

male voice tells the stressed-out listener to "Sit down, tell me all your troubles . . . That'll be \$300 please." Because stress seems to provoke a need to break something, the sound of breaking glass is used in many "stressbuster" products, like coasters which sound very authentically shattered when you put your glass down. Or you can get The Mad Rock, "the rock with an attitude," a soft foam rubber mass colored like a rock, that produces the sound of breaking glass when thrown.

"God not only plays dice, he also sometimes throws the dice where they cannot be seen."

— Stephen Hawking

Biofeedback for Hypertension When Does It Work?

Interest in non-drug treatment of hypertension has accelerated in recent years because of the adverse effects of anti-hypertensive drugs and the observation that many patients with mild hypertension respond satisfactorily to such measures. These include stress reduction techniques such as meditation, autogenic and muscular relaxation training and biofeedback. As with drug therapy, predicting which patient will respond best to any specific modality may be difficult. However, by reviewing and analysing psychophysiologic parameters in patients who have either succeeded or failed to achieve benefits with behavioral approaches, it has been possible to develop a Hypertensive Predictive Profile (HYPP). Individuals are most apt to achieve success if they have a high anxiety score (Spielberger State and Trait anxiety inventory), increased muscle tension, cool hands, rapid pulse, high plasma and urinary cortisol levels, and elevated or normal plasma renin activity). Biofeedback approaches for hypertension are generally designed to lower blood pressure by teaching patients how to reduce muscle tension, increase fingertip temperature, altering galvanic skin response, or some combination of these. The very successful program developed by Lynch and associates at the University of Maryland uses direct blood pressure measurement feedback, during which the patient's blood pressure and heart rate are displayed on a video terminal with measurements being recorded at one minute intervals. In this way, the effects of speech stylistics, content of conversation, etc., can be immediately appreciated. However, this biofeedback technique requires continuous interaction with a trained therapist, in a process known as transactional psychophysiology. If increased muscle tension or vasoconstriction contribute to eleva-

(continued on page 6)

Biofeedback for Hypertension — When Does It Work?

(continued from page 5)

tion of blood pressure, then it is plausible that learning how to influence these factors might also lower elevated blood pressures.

In one recent report, patients with essential hypertension, not on drug treatment, were given 16 twice a weekly EMG relaxation treatment sessions. In the post treatment follow-up period, twenty-three of the patients (out of the original group of 39) had successfully lowered their mean arterial pressure by at least 5 mm Hg. Ninety percent of this successful group had normal or high renin activity, suggesting that patients with low renin may not be satisfactory candidates for relaxation training. As part of the protocol, patients were challenged with a diuretic to stimulate renin activity. It was noted that patients who had the greatest blood pressure lowering response to this challenge, were also in the group most likely to improve with this type of biofeedback approach.

"Some people never learn anything because they understand everything too soon."

— Alexander Pope

New Form of Post-Traumatic Stress Disorder

Post-traumatic-stress disorder (PTSD) has been well defined and is usually associated with catastrophic stressful events, such as the recent Viet Nam conflict. It has also been described following a heart attack, and may be a sequel of other serious medical problems according to a recent report. A single, childless woman had been referred for psychiatric consultation. 2-1/2 years previously she had undergone a therapeutic abortion by suction curettage (without anesthesia) in the ninth week of her first pregnancy, because of a hydatidiform mole. The procedure was very uncomfortable, and unfortunately was associated with marked postoperative vaginal bleeding, fever and pain. This necessitated further surgical intervention and eventually led to other complications, including a fertility problem.

Shortly after the abortion, the patient began to experience severe and typical PTSD symptoms of severe anxiety, depression, and insomnia, as well as recurrent nightmares, thoughts and images relating to the suction abortion. She developed vaginismus, a loss of libido and exhibited progressive avoidance behavior with respect to any medical environment or situation that might lead to sexual intercourse. A few months after her abortion, her relationship

with her boyfriend ended, she was unable to return to work, and has remained unemployed ever since. Despite vigorous therapy, there has been no improvement in her symptoms over this period of time. Inasmuch as the current definition of PTSD includes an event that would be "a serious threat to one's life or physical integrity" and "markedly distressing to almost anyone," it is suggested that certain non-combat medical problems of iatrogenic origin should also be included under this diagnosis and that the disorder may be more widespread than previously considered.

"New medicines and new methods of cure always work miracles for a while."

— William Heberden

Stress and Multiple Sclerosis

There has been considerable controversy concerning the role of stress in aggravating symptoms and signs of multiple sclerosis or an exacerbation in patients in a stage of remission. Several years ago, one of the Iran hostages was released prematurely because he had apparently developed multiple sclerosis and this was attributed in the popular press as having been precipitated by the stress of his incarceration. Similar anecdotal reports abound. On the other hand, when ACTH and cortisone first became available, these stress-related hormones were reported to have improved many patients with multiple sclerosis and were used as therapy for several years. There is increasing evidence that multiple sclerosis is related to a disturbance in immune system function. Since stress can have profound effects on the immune system, it seems likely that it could be a factor either in precipitating the illness or influencing its course.

In laboratory animals, there appears to be a laboratory model for multiple sclerosis known as experimental allergic encephalomyelitis (EAM), which produces weakness or even paralysis of the bladder, quite similar to that which occurs in many multiple sclerosis patients. EAM results from an "immunologic assault" on brain and spinal cord tissue. However, researchers now report that stress seems to exert protective effects in this disorder and can even prevent it in susceptible animals. To further study this, EAM rats were treated with injections of adrenal hormones and similar beneficial effects were again demonstrated. Conversely, when the adrenal glands were removed from these animals, leading to a deficiency in these hormones, their condition worsened. Those animals who had experienced a remission following their first attack promptly had a relapse when their adrenal glands

(continued on page 7)

Stress and Multiple Sclerosis

(Continued from page 6)
were removed.

Part of the difficulty in evaluating the significance of these findings has been the variability in the course of this experimental disease. However, it has now been possible to develop a strain of rats in which there is consistently an initial attack of paralysis, followed by a 4-5-day period of remission, and a final 100% relapse. The period of remission may be due to a temporary ability of the animal's immune system to combat EAM.

In an interesting experiment, all of these new strain of rats suffered the expected initial attack of paralysis. As soon as they recovered they were divided into two groups. One received no further treatment and subsequently all developed relapses and a recurrent episode of paralysis. The second group was subjected to five stressful sessions over an eight-day period. Surprisingly enough, most of these animals demonstrated complete protection from the usual relapse. Those few who were not entirely asymptomatic had only minimal neurological signs and no paralysis. Although it is often dangerous to extrapolate freely from rats to humans, these intriguing findings should be pursued. It is possible that some form or degree of stress may be beneficial for certain patients with multiple sclerosis. It may well be that this is mediated and can be tracked by concomitant changes in steroid excretion patterns.

"God cannot alter the past but historians can."

— Samuel Butler

How Does Stress Contribute to Heart Attacks?

Under situations of acute stress, the body automatically reacts with "fight or flight" responses characterized by an intense stimulation of the sympathetic nervous system and the adrenal glands. The subsequent flooding of the system with adrenalin-like hormones can produce heart attacks by causing direct damage to heart muscle and fatal disturbances in heart rhythm. In addition to such direct effects, there is an elevation of cholesterol, triglycerides, and free fatty acids which may lead to an accelerated pattern of atherosclerosis. The viscosity, or thickness of the blood, is also increased because of an increased production of red cells, plasma serumucoids, fibrinogen and increased platelet "stickiness." All of these changes tend to favor the formation of clots and thrombosis in both the coronary and cerebral circulation.

Most heart attacks, strokes, and sudden death appear to occur between the hours of 6 am and 11 am when such adrenalin-related effects are at their height. Stress can also cause severe and protracted spasm of the coronary vessels resulting in a sufficient interruption of the flow of blood to cause a myocardial infarction. Under such circumstances, there may be little evidence of any structural blockage of the coronary vessels although individuals who already have some degree of underlying atherosclerosis are at greatest risk.



**Karl Hofer, Tommy John, Paul J. Rosch, M.D.,
Phil Esposito and Pierre LaRouche.**

2nd Annual Less Stress Golf Tournament A Huge Success

The American Institute of Stress Second Annual Less Stress Golf Tournament was held on Wednesday, October 4th, 1989, at the Elmwood Country Club in White Plains, New York. The sold-out field of 140 players and local golf professionals also attracted hockey stars Phil Esposito and Pierre LaRouche, baseball great, Tommy John as well as other celebrities. The tournament was sponsored by the Royal Concordia Hotel of New York (now the Royal Rihga hotel) and was co-chaired by its general manager, Karl Hofer and Guido Cribari, the well-known sports writer.

Phil Esposito was the recipient of the annual "Less Stress" Award for 1989, honoring an individual who best handled stress during the preceding year. Among the numerous and lavish prizes were First Class round trip tickets to Japan, courtesy of Japan Airlines, round trip tickets to Austria, from Austria Airlines, tickets for four to several of the best Broadway shows, dinners at exclusive Manhattan restaurants, and spectacular trophies.

Also auctioned off were a variety of autographed memorabilia including a set of skis from Olympic champion, Hans Klammer, a baseball bat from Phil Rizzuto, and Phil Esposito's hockey stick.

Participants enjoyed a gourmet buffet dinner and approximately \$25,000 was raised for The American Institute of Stress.

Book Reviews • Meetings and Items of Interest

Book Review

Gender & Stress, edited by Barnett, R.C., Biener, L., and Baruch, The Free Press, MacMillan Publishing Company, 1987, \$32.95.

This is an interesting collection of articles designed to explore various aspects of differences in stress responses in males and females. It has long been observed that women live longer than men and have less coronary heart disease. On the other hand, they have a higher incidence of anxiety, depression, minor physical illnesses, days lost from work and physician visits. The editors suggest that some of these differences may relate to different types of stresses encountered by women or altered reaction patterns. The book is divided into several sections, the first dealing with gender differences in cardiovascular and neuroendocrine response to stressors, and gender differences in stress-related disorders. The second portion deals with social roles and their effects as stressors or buffers against stress. A third is devoted to specific stressors with emphasis on life stages, events, and other chronic concerns which apply more to females than males. Subjects such as the role of gender in criminal victimization, coping with entry into adolescence, and weight concerns are addressed. In addition, there are chapters devoted to sex differences and cognitive coping with stress, the role of personality in stress responses, and gender differences in the use of substances for coping. Further research reveals that in spite of a lower level of physiological reactivity during stressful experiences, females are more likely than males to report more psychological distress. This suggests that the physiological cost of adaptation may be greater for men whereas the psychological burden is more prominent in females. This book is very attractive, well written, comprehensive with a very up-to-date bibliography and is highly recommended.

Audio Cassette Review

The Smart Way to Relax: An Intelligent Solution, by Arlin Brown, M.D., Rudra Press, P.O. Box 1973, Cambridge, MA 02140, 1-800-876-7798, \$15.95.

These two cassettes have been produced and narrated by a psychiatrist from the Harvard Community Health Plan and are

designed to explain the theories behind various relaxation techniques and to provide practical ways to achieve their benefits. The material is clearly presented in a soothing fashion. Among the techniques offered are simple breathing exercises, mindfulness, progressive muscular relaxation, visual imagery, and a combination of muscle relaxation and visualization to enhance this type of autogenic training. There is also a helpful segment at the end providing useful hints about how to extend these relaxation techniques and incorporate them into your daily life. Clearly, stress is different for each of us and some individuals will achieve greater benefits from using one technique than another. This program provides careful background information and instruction in all the above areas and provides the opportunity for patients to learn what works best for them.

Meetings and Items of Interest

Jan. 19-20, Multiple Addictions: Theory, Research and Treatment, San Diego, CA, San Diego College of Extended Studies, San Diego State University, CA 92182, Anne Wright (619) 594-6255 FAX (619) 594-7080.

Jan. 27-28, Life Is Too Short: A De-stressing workshop for physicians and their spouses, Poipu Beach, Kauai, Hawaii, The Center for Professional Well-Being. Contact David J. Elperin, M.D., P.O. Box 457, Kalaheo, HI 96742, (808) 332-7245.

Feb. 25-Mar 2, 1990, American Journal of Health Promotion, Cancun, Mexico. (313) 258-3754.

March 21-24, A Summit Meeting on Corporate Stress, Breckenridge, CO. Biobehavioral Institute of Boston, 1101 Beacon St., Brookline, MA 02146. (Registration fee \$450 before Feb. 1.) Mail to: Summit Meeting, P.O. Box 4329, Breckenridge, CO.

Mar. 29-Apr. 1, 1990, American Society of Contemporary Medicine and Surgery (Stress and Hypertension), Phoenix, Arizona.

April 19-22, The Society for Professional Well-Being; Third Annual Conference, Philadelphia. Dr. Sharp, Box 129, Milford Square, PA 18935.

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