The Newsletter of
THE AMERICAN INSTITUTE OF STRESS

Number 3 1992

Mental Stress and Coronary Spasm

The role of mental or emotional stress and heart attacks and sudden death has long been acknowledged, and is increasingly being confirmed. John Hunter, the distinguished 19th Century British physician who elevated surgery from a mechanical trade to a profession, suffered from angina. Being a keen observer, he complained "my life is in the hands of any rascal who chooses to annoy and tease me." This turned out to be somewhat prophetic, since he did die suddenly while having a heated argument with a colleague. Hunter's suspicions have recently been confirmed by researchers who have demonstrated that emotional stress can cause significant coronary artery constriction.

Thirty patients referred for cardiac catheterization were studied before, during and after a period of being subjected to mental stress. It was observed that normal coronary arteries were not affected or actually dilated in response to mental stress. However, vessels that had a significant degree of atherosclerosis reacted with significant constriction and spasm, further reducing blood flow as much as 24 percent, despite the fact that the patients may have had no symptoms of this. This is of considerable concern since many patients with severe coronary atherosclerosis suffer from such silent ischemia. They are thus unaware that they may have sudden and severe reduction of blood flow to the heart because of the absence of the usual warning signs that would make them curtail dangerous activities. *Internal Medicine, January 1992*

ALSO INCLUDED IN THIS ISSUE

Teens and Diets

A recent survey of more than 3,000 grade 5th to 8th students revealed that more than half of the girls had been on diets, and 11 percent admitted they had completely fasted for one or more days. About one out of five boys had also been on a diet in the preceding year or two. In most cases, the decision to go on a diet is due to the perception of being unattractively overweight. Fifty-five percent of the girls viewed themselves as being much too fat, whereas only 13 percent were actually over accepted guidelines. Twenty-eight percent of the boys also believed they were overweight although, again, only 13 percent fell into this category. Extremes of this type of misperception are at the root of anorexia nervosa, where patients persistently see themselves as being grossly overweight, despite the fact that they are actually painfully thin.

The vast majority of those surveyed reported that they were able to stick to diets for only short periods of time and that they were rarely effective. Often, the problem is lack of exercise, or adequate knowledge about nutrition. In other cases, there may be deep psychological problems. Some kids are under unusual pressures because they have at least one obese parent who is concerned that their child is going to turn out like them. In fact, children do tend to follow the examples set by parents. If they see

(continued on page 2)

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

Teens and Diets

(continued from page 1)

them trying to lower their weight by following proper diets and exercising regularly, they are more apt to mimic these patterns.

However, most of the diet fad in kids has to do with faulty perceptions of distorted body images. One sixteen-year-old reported that she had been on a repeated series of unsuccessful diets in the seventh and ninth grades. "But in 10th grade, I joined the swim team and lost 15 pounds involuntarily. My eating habits hadn't changed at all. Girls think that they have worse bodies than they actually do. You'll never hear a guy say, 'Oh, I look so horrible. I look so fat today.' "

U.S.A. Today, 1-6-92

"All philosophy lies in two words, sustain and abstain."
Epictetus

Mixing Medicine And Alcohol

Patients taking medications are sometimes warned not to drink alcoholic beverages because "they don't mix." This is particularly true for sleeping medications, tranquilizers, anti-depressants, pain relievers, muscle relaxants, antihistamines, and some cough/cold and high blood pressure drugs. In some individuals, especially those who are older and/or taking more than one medication, the combination may cause confusion, impaired coordination, drowsiness, problems with breathing, loss of consciousness or even death. Patients on blood thinners, drugs for diabetes, epilepsy and gout, may also find that drinking alcohol severely alters therapeutic effects. In other instances, Flagyl, certain antibiotics, and diabetic drugs can result in an antabuse-like reaction with alcohol, producing severe nausea, vomiting and weakness.

Recently, a new problem has surfaced in patients taking some of the newer drugs for ulcers or other stomach complaints. These medications may increase the inebriating effects of alcohol, so that two or three drinks could have the punch of five or six. Aspirin, most arthritis preparations and potassium preparations tend to cause stomach irritation, and consequently, these anti-ulcer drugs are frequently prescribed to prevent such problems. Such patients may have a false sense of security about their ability to drink and find that they got more than they bargained for.

Modern Maturity, February-March, 1992

"If you want the special, I'll need a note from your doctor."

Racial Reactions To Medication

Deciding which drug and how much of it to give any patient is often determined by such things as age, weight, medical history, incompatibility with other medications, etc. Physicians, especially psychiatrists, may now also need to inquire about a patient's ethnic background as well, according to a California Professor of Psychiatry. He had originally been trained in Taiwan, and was thus surprised to find that schizophrenic patients in California, required up to 30 milligrams a day of one antipsychotic medication, whereas the same therapeutic effect in Taiwan could be achieved with only 2 milligrams of the same preparation. Intrigued by this enormous disparity, he embarked on a study which eventually demonstrated that Asian patients metabolized the drug much more slowly and thus maintained higher levels in their blood stream for longer periods of time. In addition, they also had higher levels of the pituitary hormone, prolactin which increases sensitivity to these types of drugs.

Subsequent studies in Hispanics, Blacks, and Samoans, suggest that they also have increased responsivity to various psychiatric and antihyper-

tensive medications. As previously noted, the effectiveness of many drugs may also vary widely depending upon the time of day they are administered, relation to meals, etc. These and other factors may help to explain conflicting reports about both the efficacy, side effects, and toxicity of the identical drug in different parts of the world.

American Health, October, 1991

"Science is the great antidote to the poison of enthusiasm and superstition." Adam Smith

More on Stress and Arthritis

It has been observed that patients with rheumatoid arthritis are often depressed or in a bad mood, and frequently complain of lack of energy and sleep problems. While that has sometimes been attributed to the psychological response to this debilitating condition, recent research suggests that a deficiency in stress hormones may be the real culprit. Several strains of rats having differing susceptibility to inflammatory disorders like rheumatoid arthritis, were subjected to a variety of physical and emotional stresses. Measurements were made of specific hormones as well as brain neurotransmitters involved in the response to stress. There was not only a clear correlation between these measurements and accompanying stress-related behavioral responses, but also to susceptibility to the development of arthritis. The most significant relationships were those involving the release of corticotropin releasing hormone (CRH) in the hypothalamus and other defects in the hypothalamic/pituitary/adrenal (HPA) axis. In addition to arthritis, unusual depression is also seen in patients with Cushing's disease and hypothyroidism. These are also believed to stem from similar hypothalamic disturbances, and may well play a role in human autoimmune disorders such as rheumatoid arthritis as well as stress-related emotional illnesses.

JAMA, 2-19-92

"What we anticipate seldom occurs; what we least expect generally happens." Disraeli

Woodpeckers' Territorial Triumph

The strong and overwhelming need to define and protect the contents of one's turf, has long been noted by anthropologists, sociobiologists, and other students of animal and human behavior. The territorial protection instinct is extremely strong, particularly around the time of the mating season. Most of us have seen films of adult male baboons, elk, walruses or seals battle it out in a life or death struggle to preserve their turf, especially if it contains a few prize females. We are less likely to think of this with respect to birds, but don't tell that to the telephone company.

"Now, this is really for the birds!"

In the early spring, when the mating season is about to take place, woodpeckers are particularly prone to excavate large holes in trees to serve as nests and to establish their territory. The stimulus for this may be rising hormone levels. Unfortunately, utility poles are also frequent targets, and often are weakened to the point where they suddenly snap from a lineman's weight or when subjected to strong gusts of wind. Because of their specific location, certain poles sometimes have to be replaced several times in a season, while identical adjacent structures may go unharmed for years. The cost for replacing a pole is around $15,000, and, in most instances, the utility company is forced to erect a steel or concrete pole, since other deterrent strategies are usually ineffective.

The Atlantic, March 1992

"Man must go back to nature for information." Thomas Paine

T.G.I.F.? Not Always

People often feel blue on Mondays when they have to return to their jobs or school. Conversely, "Thank God It's Friday" is so widely used to suggest the promise of relief from job stress that a very successful chain of TGI Friday restaurants has sprung up. However, not everyone follows this mood pattern, according to a recent survey of University of Michigan students. They were evaluated with respect to certain personality and psychological characteristics and traits, and also asked to keep a careful diary of their mood on a daily basis for three months. The researchers found that those students who were strong extroverts were much less apt to have mood swings that followed the conventional "blue Monday," "T.G.I.F." cycle. It was postulated that this might be because such individuals tend to seek stimulation, and "don't wait until weekends to have parties." On the other hand, although introverts may find weekly routines boring, "they tend to like

(continued on page 4)

T.G.I.F.? Not Always

(continued from page 3)

them because they keep their already hyper-nervous systems from getting more jangled." Indeed, one even made a point of wearing the same clothes on the same day of each week.

Many other socio-cultural distinctions and personality factors may also exert important influences. In Japan, where it is not unusual for workaholics to put in 10 or 12 hour days, many feel guilty and depressed at the prospect of a day off. As noted previously, some have even had to be hospitalized for what has been termed "weekend depression syndrome." *American Health, October 1991*

"80% of stress is showing up."

Woody Allen

Silicon Valley Stress

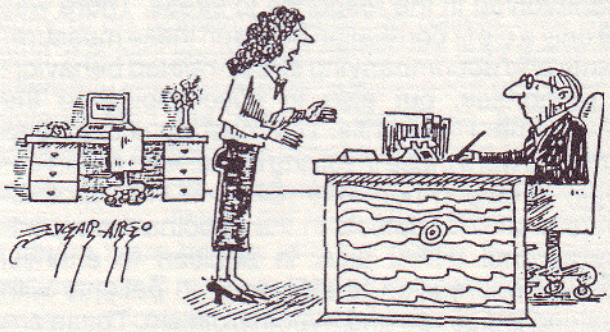
Early reports from Silicon Valley painted a picture of an idyllic, stress-free workplace. Employees of innovative computer companies enjoyed extreme flexibility in dress codes, working hours, cheerful, attractive surroundings, exercise facilities, saunas, company-sponsored day care nurseries, and a variety of other inducements to make life more leisurely and enjoyable. As noted in a recent article, "during the boom years of the early eighties computer companies were running at full throttle and everything was possible." Recently, however, all of that has changed drastically. The recession, fierce competition, and lower profit margins have led not only to massive layoffs, but also to a sharp increase in stress levels for those who remain. As one executive complained, "What once was fun and exciting and exhausting is now just plain exhausting."

The author of a recent book, *The Silicon Syndrome: How to Survive a High-Tech Relationship,* who has set up a help center to deal with an increasing number of stressed-out Valleyites, says her clients are working ten hours more per week than they did just a year ago, and that "eighty-hour work weeks are not unheard of." Expensive foreign cars and million dollar homes are fairly common among the 500,000 residents of Silicon Valley, but few workers can enjoy them. Most employers now expect you to "put the company first and your family second." As a consequence, divorces are becoming increasingly common. One former sales manager for a large software company actually sued the company, claiming he was fired for putting his family ahead of his career when he refused to work more than 50 hours a week. He calculated it would take him 106 hours to satisfactorily complete his usual weekly work assignment.

Although most employees who remain are paid well, and have the additional lure of attractive stock options, many are experiencing mid-life crises, because of the growing fear that the situation will get progressively worse. As one noted, "Fear is running the business." Some companies still try to be "family friendly" and allow work at home, or showing up in jeans, and basically doing whatever you want as long as you get the work done. Others view a forty-hour work week as essentially part-time employment. Many workers who have to commute long distances, now complain that they speak more to their wives over the phone than in person. While the pay may be good, there is just too much stress, and the excitement and fun of the old days appear to have gone forever.

One of the major current problems is that once a product comes out, it is apt to be rapidly replaced by a newer upgrade or less expensive version that does the same thing. As a consequence, designing and testing a system now has to be done in six months, compared to 12-18 months only a year ago. The price for a Compaq Deskpro Model 60 computer was $3,699 in February 1991. By February 1992, it had been slashed to $1,899 and further reductions are forecast.

USA Today, 7-18-91, 2-25-91



"The computer says it's down in honor of Thomas Edison's birthday."

Hot Peppers for Diabetic Pain?

Diabetic neuropathy can be a very painful condition that is not necessarily related to the severity or duration of the disease or associated with other diabetic complications. It is notoriously resistant to treatment. It has been found that a local application of capsaicin, the active ingredient in hot peppers, may be beneficial in other severe and chronic pain conditions, such as post herpetic neuralgia following shingles, and in patients with persistent pain following breast surgery. In a recent study, 300 patients with painful diabetic neuropathy from twelve medical centers, participated in a double blind study to determine the effects of capsaicin. They

(continued on page 5)

applied a cream containing either this hot pepper chemical, or one with an inert placebo, four times a day to their painful sites. Evaluations were made by the patient and physicians at two, four, six, and eight weeks, utilizing self-report ratings and other measurements of pain intensity and relief.

Slightly more than half of the patients who had applied only the inactive cream reported improvement, attesting to the power of the placebo effect. However, almost 70 percent of those in the active ingredient group were significantly benefited. Some had also noted a slight burning sensation on the first few applications, but this decreased and was associated with progressive pain relief as the study continued. This is consistent with the theory that capsaicin works by desensitizing nerve endings that release a pain modulating chemical known as "substance P." Pain perception and thresholds may vary considerably. Some people can eat Tex-Mex and Szechuan food and jalapeno peppers at the same time, without any discomfort, while just the sight of something hot and spicy is enough to cause stomach problems for others. For many patients with diabetic neuropathy, some slight, transient, burning would be a small price to pay for any kind of relief from this painful, persistent and puzzling condition.

Hospital Practice, 2-15-92, Archives of Internal Medicine, 151: 2-25-91

"Part of the secret of success in life is to eat what you like and let the food fight it out inside." Mark Twain

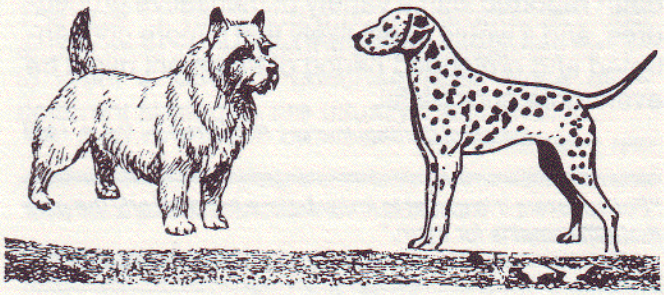
More on the Health Benefits of Pets

The stress buffering effects of a strong social support system have long been recognized. While this is generally appreciated in terms of close relationships with family and friends, having a pet appears to provide similar rewards. The beneficial effects of personal interactions with animals for patients with a variety of mental and emotional disorders has been increasingly reported. This was apparent at least 200 years ago when a Quaker retreat in England encouraged their patients to spend time with farm animals that roamed the grounds. They had found "that this pursuit would improve their mental state more than the archaic, sometimes brutal 'therapies' commonly prescribed for the mentally ill at that time." Even the mere presence of an animal or pet has been shown to calm disturbed children, and get incommunicative people to initiate conversations.

The explanation for this is not clear, but it has been speculated that unlike interactions with humans, animal companionship is uncomplicated. As one observer pointed out, pets are "nonjudgmental, accepting, and attentive; they don't talk back, criticize or give orders." A recent review of some two dozen studies of the effects of cats and dogs on geriatric nursing home patients, concluded that residents who were exposed to pets smiled more frequently, demonstrated improved alertness, and that others characterized as physically aggressive, had now become much more tolerant towards fellow patients and staff members. Significant improvement was also observed in emotionally disturbed children when college students accompanied by a dog or cat visited once a week, after only eight weeks.

In addition to such psychological benefits, it has been observed that the usual rise in blood pressure and heart rate that occurs when people read aloud in front of others, is blunted when a friendly animal is present. Patients who undergo cardiac surgery survive for longer periods of time post operatively if they have pets. In another report, it was found that elderly people with pets made fewer visits to doctors, presumably because of the diminished sense of loneliness that companionship with pets can provide.

U.S. News & World Report, 2-24-92



"You can call me in Room 221. We'll compare notes on that animal in 225."

Stress Reduction to Treat Angina

It has long been observed that anger, fright and other streessful emotions can trigger an attack on anginal chest pain. Conversely, it should follow that learning how to reduce the effects of stress might provide benefits for many who suffer from this complaint. Researchers studied 40 angina patients, and also asked them to record the number and severity of attacks, and the amount of medication required in a pocket diary for a ten-week period. In the fifth week, they were randomly assigned to four different groups and instructed to listen to a cassette tape daily for the next two weeks period. Each of the four groups received a different tape, which either contained information about angina, guided imagery exercises, relaxation proced-

(continued on page 6)

Stress Reduction to Treat Angina (continued from page 5)

ures, or both relaxation and imagery instruction combined. They were then followed again for an additional four weeks. All of the patients in the three imagery and/or relaxation groups reported a significant reduction in episodes of chest distress. No such improvement was found in the group that simply received information only about angina without any stress-reduction instructions. For those who noted improvement, the frequency of anginal episodes remained low for some time after the tapes had been discontinued, and then started to slowly return to their original levels. The stress-reduction tape groups also reported a decrease in the severity of their chest pain and the need for medication. A lowering of blood pressure and heart rate was also observed. Curiously, blood cholesterol levels increased slightly in this group, and no explanation was offered for this. This study suggests that simple, inexpensive stress-reduction techniques can provide significant benefits for anginal patients and perhaps others suffering from a coronary artery disease. Similar results have been reported with a variety of meditative procedures, and it would seem likely that a more concentrated and prolonged period of treatment might be even more successful.

Journal of Cardiopulmonary Rehabilitation, Vol. 9, 1989

"For sufferers it is sweet to know before hand clearly the pain that still remains for them."

Aeschulus 478 B.C.

Computer Stress Costly And Climbing

As noted previously, Workers' compensation awards for job stress have been skyrocketing. One of the major causes has been claims for repetitive stress injuries. Other synonyms for this are repetitive motion injuries, cumulative trauma disorders (such as Carpel Tunnel Syndrome) and the Official World Health Organization designation of "work-related musculoskeletal disorders." The Director of the Office of Ergonomics at the Occupational Safety and Health Administration stated that '30-40% of workers compensation claims now result from musculoskeletal disorders," and that in a year or so half of all the awards will be for such problems. Back injuries still make up the most costly component, but wrist and hand complaints are the fastest growing category. In 1984, these accounted for more than $27 billion a year in lost wages and medical care. It is estimated that the price tag is now closer to $60 billion annually. Particularly high rates of injury are seen in computer operators such as data entry personnel, telephone operators, writers and editors. At *Newsday*, 40% of writers and editors have at some time reported hand and wrist complaints attributed to excessive computer activities. Employers are often not very sympathetic to such grievances, since they may be hard to distinguish from similar claims by malingerers. Such concerns are not entirely unfounded. A recent study of some 28,000 workers revealed that victims of repetitive stress injury "take longer to recover and are less likely to return to work if they have filed workers compensation claims."

New York Times News Service 3-6-92, Palm Beach Post

"Man is still the most extraordinary computer of all."

John F. Kennedy, 1963

Do Type A Moms Have Type A Babies?

There appears to be some evidence that the answer appears to be yes. "Maternal Type A personalities are one of the factors that determine how a baby behaves temperamentally" according to the lead author of a recently published medical study of 60 women preparing to deliver their first child. It is well known that newborns may act quite differently with respect to restlessness and crying patterns, but the reasons for these and other behavioral differences in behavior is not clear, and could be due to many factors. According to the researchers, "intensely task oriented or Type A mothers have babies who cry more." In contrast, mellow type B mothers tended to have infants with more predictable and tranquil activity patterns. It would obviously be extremely difficult to measure Type A behavioral characteristics such as competitiveness, speed and impatience in a newborn. More importantly, it is equally clear that ratings of infant behavior could be severely biased by the mother's own personality and attitudes. However, Type A behavior is being increasingly identified in younger and even pre-school children because of educational activities that foster such things as peer pressure, competitiveness and time urgency. It would seem that this is the result of environmental stimuli rather than heredity. However, it may be that children are more likely to be enrolled in preschool educational activities by Type A parents, and the nature vs. nurture controversy continues.

Science News 3-4-92

"A baby is an angel whose wings decrease as his legs increase."

French proverb

Japanese Workaholism On the Wane

Japanese leaders have recently been criticizing American workers for being lazy while, at the same time, praising their own work ethic. On the other hand, other Asian rim countries perceive the Japanese as being comparatively lazy by their own standards, and some new reports seem to support this. There is now a growing trend for Japanese laborers and unions protesting current work conditions. One Nissan assembly line worker recently complained that he only had 150 seconds to bolt in a gasoline tank and attach 10 other parts to each automobile moving down the assembly line. At peak times, when the process was speeded up, he had to put in at least twelve hours a day and was constantly exhausted. Nobody ever bothers to complain, because they know it would be useless, but now that appears to be changing. Workers are now protesting that their long hours and hard work have not resulted in sufficient benefits or an improved standard of living, and their unions have begun to demand shorter hours. The message seems to have hit home, and many offices and factories formerly open all day Saturday are now closed for the weekend. The average Japanese worker put in 2,432 hours in 1960 compared to slightly over 2,000 last year, and the Ministry of Labor recently set a target of 1,800 hours for 1993. In a recent speech, Prime Minister Miyazawa said "Shorter worker hours and more comfortable work places are national goals to make our working lives less stressful," a rather sharp departure from his criticism of the poor American work ethic. Another report from The Hakuhodo Institute of Life and Living also stated that "the myth of Japanese workaholics was breaking down." Nevertheless, Japanese workers still work at least a month more a year than their American counterparts, and the figure is probably greater, since Japanese companies routinely underreport the hours their employees work. One survey indicated that more than half of all employees worked unpaid and unrecorded overtime.

Palm Beach Post, 3-3-92

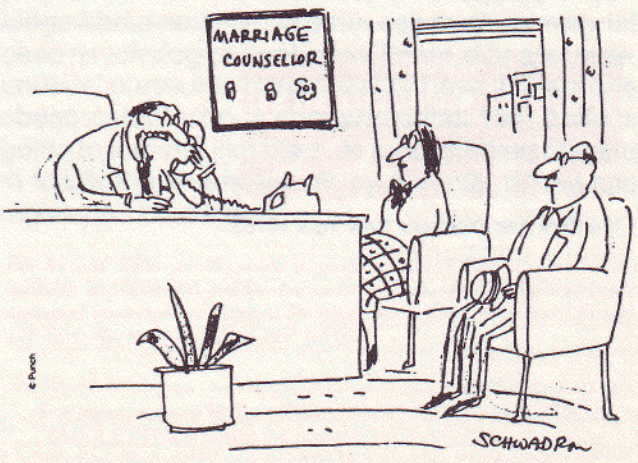
"The ant is knowing and wise; but he doesn't know enough to take a vacation."
Clarence Day

Blood Pressure Hyperreactivity and Heart Attacks

Stress related blood pressure elevations, such as white coat hypertension, are generally believed to represent exaggerated but normal responses that have little prognostic significance. Blood pressures taken by physicians in the office setting are usually higher than those obtained by a nurse, which, in turn, are greater than those obtained at home by the patient or relatives. Ambulatory blood pressure monitoring studies reveal that, in most instances, such individuals have normal blood pressures throughout the day, with only sporadic and transient rises during periods of emotional stress. While this is considered to be benign with respect to an increased incidence of subsequent hypertension or stroke, the same may not be true for coronary heart disease. A recent follow-up on patients who had undergone ambulatory blood pressure monitoring revealed that those who exhibited hyperresponsivity to stress subsequently had more than double the number of anticipated heart attacks compared to normal responders. The relationship between elevated diastolic blood pressure in response to stress and heart attacks was especially pronounced in males, blacks, smokers, and those under 55. These relationships remained constant even when accounting for age, gender, prior cardiovascular history and medications such as diuretics and beta blockers. It is not clear whether such hyperreactive blood pressure responses to stress are related to inappropriate coping styles, anxiety levels or certain personality traits. Other research has shown a strong association between Type A behavior and certain components such as anger expression, hostility and cynicism with increased coronary heart disease. While Type A's do not necessarily have a higher incidence of fixed hypertension, they do exhibit greater and more sustained elevations of blood pressure in response to challenges and emotional stress, and it would be of interest to determine if this might explain these findings. Nevertheless, if confirmed by others, it would appear that while white coat hypertension may not be associated with future hypertension, it may predict other adverse health effects.

Internal Medicine News, 2-92

"The heart has such an influence over the understanding that it is worthwhile to engage it in our interest."
Lord Chesterfield



"And that goes for that battle-ax mother of yours, too, Doris!"

Book Reviews • Meetings and Items of Interest

The HART Program: Lowering Your Blood Pressure Without Drugs. Kerman, D.A. with Turbo, R., Harper Collins, New York, 1992, 266 pp., $20.00.
This book is based on research studies conducted under the auspices of the highly respected Voluntary Controls Program at the Menninger Clinic. It provides a comprehensive and objective overview of non-pharmacologic approaches to the treatment of hypertension. This has become a controversial subject in recent years, as noted in the Newsletter, with considerable disagreement about the universal benefits of salt restriction, calcium and/or potassium supplementation, exercise, meditation and other stress-reduction approaches, etc. All of these topics are discussed in detail, with an excellent review of stress-reduction strategies, such as progressive muscular relaxation exercises and simple meditative techniques. The patient aid charts located in the appendices to chart daily blood pressure progress and monitor stress levels and stress coping strategies are particularly valuable. Highly recommended for all hypertensive patients who would like to explore safe and proven ways to reduce medication requirements.

Meetings and Items of Interest

April 23-26, Med. College of Georgia—International Pain Symposium, Atlanta, GA, (800) 221-6437.
April 24-26, Albert Einstein Coll. of Medicine, 5th International Conference on Eating Disorders: Research and Clinical Findings, N.Y., NY, (212) 920-6674.
April 25-May 9, American Inst. of Medical Educaton—Creativity and Madness: Psychological Studies of Art and Artists, Museum Visits, Italy, (818) 789-1029.
April 26-May 11, International Medical Seminars—Stress Reduction Workshop, Asia Minor, Turkey, (805) 686-1165.
April 28, JHU—6th Annual Mood Disorders Symposium, Baltimore, MD, (301) 955-2959.
May 2-8, American College of Occupational Medicine—American Occupational Health Conference: Health of the Worker, Washington, DC, (708) 228-6850, x19.
May 9-14, College of Family Physicians of Canada and British Columbia Chapter—13th WONCA World Conference on Family Medicine, includes Workshop on Physician Well-being, (416) 493-7513.
May 13, McMaster U.—Stress Management Level 1, Hamilton, Ont., (416) 525-9140, x2219.
May 13-15, Northwest Center for Occupational Health & Safety—Occupational Hazards to Health Care Workers: Latest Research and Prevention Strategies, Seattle, WA, (206) 543-1069.
May 14, Texas Academy of Family Physicians—Behavioral Medicine, Anxiety Disorders, Obsessive-compulsive Disorders, Elderly Injuries, Attention Deficit, San Antonix, TX, (512) 451-8237.
May 16, American College of Emergency Physicians, Maryland Chapter—Revitalization for Emergency Professionals and Spouses: A Day of Enhancement, Baltimore, MD, (301) 727-2237.
May 18, American Medical Seminars—Physician Stress: Causes, Manifestations and Solutions, Sarasota, FL, (813) 388-1766.
May 28-29, U of Pittsburgh School of Medicine—Psychiatric and Psychosocial Aspects of Organ Transplantation, Pittsburgh, PA, (412) 624-0701.
May 28-31, U of British Columbia—Low Back Pain: A Multidisciplinary Approach, Whistler, BC, (604) 822-2626.
May 29-31, Dannemiller Memorial Educational Foundation—Pain From the Neck Up, Boston, MA, (800) 328-2308.
June 5-6, U. of Minnesota—Clinical Hypnosis Workshops, Minneapolis, MN, (612) 626-7600.
June 14-19, First World Congress for Electricity and Magnetism in Biology & Medicine, Orlando, FL. Contact Dr. William G. Wisecup, 120 W. Church St., Fredericksburg, MD 21701, (301) 663-1915.
June 29-July 3, 13th Cape Cod Institute—Infancy and Childhood Preludes to Adult Development: On the Origins of Coping with Stress. Contact Gilbert Levin, Ph.D., Albert Einstein College of Medicine, 1303 Belfer Bldg., Bronx, NY 10461, (212) 430-2307.
July 2-5, International Back Pain Society—Back Pain: Current Concepts and Recent Advances, Budapest, Hungary, (44 81) 206.0426.
July 6-10, 13th Cape Cod Institute—Behavioral Medicine Applications. Contact Gilbert Levin, Ph.D., Albert Einstein College of Medicine, 1303 Belfer Bldg., Bronx, NY 10461, (212) 430-2307.
July 13-17, 13th Cape Cod Institute—Psychopharmacology Update. Contact Gilbert Levin, Ph.D., Albert Einstein College of Medicine, 1303 Belfer Bldg., Bronx, NY 10461, (212) 430-2307.
July 13-17, 13th Cape Cod Institute—Multiple Family Group Therapy for Abuse. Contact Gilbert Levin, Ph.D., Albert Einstein College of Medicine, 1303 Belfer Bldg., Bronx, NY 10461, (212) 430-2307.
Aug. 17-21, Hans Selye Symposia on Neuroimmunology and Stress Advances in Psychoneuroimmunology, Satellite Meeting of the 8th International Congress, Budapest, Hungary. In North America (204) 788-6320, In Europe 36-1-185-2255.

ISSN # 1047-2517

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