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Low Cholesterol, Serotonin and Depression

Elderly men with low cholesterols were three times more likely to show evidence of clinical depression than others with high levels according to a recent study. This report appears to confirm other research demonstrating a relationship between low cholesterol and death due to suicide, violent behavior and accidents, as well as cancer. Much of this information comes from cholesterol lowering drug trials which have shown no reduction in overall mortality rates. Many physicians are increasingly questioning the wisdom of routinely prescribing medications to lower cholesterol except in very high risk patients. Cholesterol is a vital constituent of all cell membranes and a building block for the synthesis of steroids and other important substances produced in the body. Since it is fairly inert, many are dubious about its role in the production of atherosclerosis, since there is increasing evidence that it is really oxidized LDL resulting from free radical activity that is the real culprit. It is speculated that lowering cholesterol may also result in reduced levels of serotonin, which, in turn, are associated with depression.

In this study of men aged 70 and older, 16.4% with low cholesterol levels had symptoms of depression, compared to only 5.2% of those with higher values. The relationship between low serum cholesterol and depression did not reach statistical significance in men under 70, or in the 1200 women who were also part of this study group.

Associated Press, 1/19/93

Family Stress and Coronary Risk in Kids

The relationship between stress and heart disease is well established, as are the protective effects of strong family and social support. One might suspect that early influences of this nature might have more profound effects by helping to establish lifelong patterns, or changes in risk factors, as has been demonstrated in Type A research investigations in children. A recent study examined the association between levels of family stress, or conversely, good family cohesion, and changes in serum lipids in affected children. Assessments of family conflict or cohesion were obtained from parents, and children rated themselves with respect to aggressive tendencies, one of the components of Type A behavior. There was a definite positive correlation between family stress and an unfavorable lipid profile in boys, but not girls. Family conflict was associated with increased

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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.

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

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levels of aggression in both girls and boys in the 56 families studied, and a similar pattern was also seen in families with poor cohesion and social support. The researchers suggest that early family stress may play an important role in the development of Type A coronary prone behavior and possibly subsequent heart disease.

Psychosomatic Medicine 54:471, 1992

Stress Treatment Costs Hunter His Gun Card

That was the title of a *New York Times* article which reported that the state of Illinois "has stripped an avid hunter of his right to own a gun because he spent a night at a psychiatric unit after a bank robber pointed a shotgun to his head". The hunter's problems began with a robbery of a bank branch in the same building where he works. The robber pointed a sawed off shotgun at him and ordered him to find someone to open the safe. He promised the robber that he would try to locate someone, but ran down a corridor and left the building. A few hours later, he began to experience severe chest pains and consulted a physician. He was told that he was suffering from Post Traumatic Stress Disorder and was advised to spend the night in the psychiatric unit of a local hospital, which he did. However, this was reported to state officials who promptly revoked his gun license. State law requires revocation of the card for anyone treated in a mental institution, and is required for ownership of all guns, including hunting weapons.

The N. Y. Times, 12/20/92

Evaluating Hospital Job Stress

A Finnish study was designed to develop a standardized survey for measuring levels of job stress and job satisfaction in the hospital setting. Approximately 350 workers from medical, gynecology and obstetric, and first aid units in a middle sized Helsinki hospital were asked to list the various sources of stress that made their work duties less enjoyable, and also to identify those aspects of their activities which brought enjoyment and satisfaction. Major job stress-related problems included: not enough time to get the job done correctly, problems due to interpersonal relationships with personnel in the same department, having too much responsibility, concerns about risks for safety or health, lack of appreciation and positive feedback for work well done, troublesome patients, a lack of adequate equipment and resources on various occasions, and difficulties in achieving and maintaining pleasant collaboration with other health professionals. On the positive side, most indicated that the satisfaction they derived from their work was rewarding, although this appeared to depend more on personal perceptions of mental and physical work loads than objective criteria.

Hoitotiede, Vol. 4, 1/15/92

Stress Affects URI Treatment

It has been convincingly demonstrated that high stress levels increase susceptibility to colds and upper respiratory infections. But stress can also affect how physicians and patients behave with respect to the treatment of these infections. More than 100 patients aged 14 or older who had experienced an upper respiratory infection during the prior eight week period were evaluated. Stress levels were assessed as well as social support from family relationships, and these were correlated with clinical status, type and degree of medical care, and utilization of medical services. It was found that when patients had high stress or low family support levels, physicians tended to prescribe more medication, order more laboratory tests, and schedule more return visits. Patients with high stress ratings also had an increased tendency to seek additional medical attention, make numerous extra phone calls, and exaggerate the seriousness and duration of their illness. Physicians may respond to such patients by offering more medical services to allay their fears, especially when family support is lacking.

Family Medicine 24:5, 1992

In other words, just from wondering whether the wedding is on or off, a person could develop a cough.

Guys & Dolls

Evaluating Alternative Medicine

Escalating medical costs, an increasing fear of adverse reactions and unknown, long term side effects of drugs, and growing dissatisfaction with depersonalized medical care, have contributed to the current attraction of alternative medicine. Patients are also increasingly interested in preventing illness by means of stress reduction techniques, exercise, nutritional and other strategies, and conventional physicians often have little interest or expertise in such areas. Many alternative approaches such as biofeedback, taking much larger amounts of the recommended daily allowances of antioxidant vitamins, and stress reduction or behavioral modification which were considered fringy a decade or two ago, have now become part of mainstream medicine. The problem is that the escalation of interest in non traditional medicine has spawned a host of zealots and entrepreneurs eager to cash in on this growing trend. It is difficult for the public to distinguish between legitimate efforts that have scientific underpinnings and those which are obviously spurious. Unfortunately, almost any unconventional approach is apt to rack up scores of testimonials because of the power of the placebo effect. This includes all sorts of weird diets, sitting under a pyramid, or placing magnets on various body locations. The power of a strong belief system was appreciated 2000 years ago, when Seneca noted that "part of the cure is the wish to be cured". The recent PBS series, "Healing and the Mind" with Bill Moyers, had ratings almost double those usually expected for its time slot, and the accompanying book is at the top of the best seller list.

A recent study by a Harvard physician reported that 34 percent of patients surveyed had utilized at least one unconventional therapy approach during the previous twelve months, usually for chronic complaints such as back pain, headache, and insomnia. The National Institutes of Health have established a special Commission to encourage research and education in "unconventional medicine". However, many medical schools have already adopted some of these approaches. At the University of Louisville, medical students learn to reduce their own stress by play acting, humor, and meditation. At Harvard, medical students are taught to decrease the pain of patients undergoing breast biopsy by using yoga and breathing exercises, or to lower blood pressure by teaching them to meditate. At some medical schools, students are taught to examine how improving family relationships and social support can benefit patients with asthma, cardiac complaints, and high blood pressure. Others now teach homeopathy, acupuncture, and deep massage as alternatives to drug therapy.

Studies suggest that stress reduction, biofeedback, and social support can reduce pain, lower blood pressure, and even prolong life expectancy for patients with breast cancer. But physicians who can't afford the time required to learn or implement such approaches, and are more used to writing prescriptions or scheduling surgical procedures, are not apt to be very interested in jumping on this band wagon. Others will correctly insist on more scientific proof of the efficacy of many of these techniques. There is also the danger that patients with certain malignancies that could be successfully treated or cured with conventional therapy, might bypass this for some unproven treatment that is worthless. It will be increasingly necessary to steer a narrow course between the Scylla of orthodox medicine and the Charybdis of quackery. Although there appear to be more and more beacons to light the way, the best advice at present would seem to be "*caveat emptor*".

Newsweek, 3/18/93

Stress and Burnout in EMS Personnel

Emergency Medical Service personnel see the most stressful side of life, including victims of shooting and stabbing, children who are burned or beaten, accident victims, and every conceivable acute cardiac emergency and serious illness. New York City has one of the busiest EMS systems in the world, handling close to one million calls a year, and recent figures reflect the marked effects that stress has exerted on its 2500 members. National statistics suggest that in a population this size, a suicide might be expected about once every three years, but there were at least three suicides in New York EMS workers in the first nine months of 1992. One paramedic who was first at the scene of the brutal "Central Park Jogger" rape and beating tragedy hanged himself a few weeks before his wedding date. Another died from a self inflicted bullet wound to the head. Several other sudden deaths, officially classified as accidental, are also viewed as suicides by co-workers, including the 30 year old paramedic who drove head on into a tractor trailer while traveling at 130 mph on his bicycle. While there has been no claim that any of some half dozen sudden and unexpected deaths were directly due to job stress, the union president claimed that the job was a major factor, noting "You take the job home with you, and it affects your family life. Your family can't deal with it, then you bring those problems back to work. It's a vicious cycle and there's no way to get it out of your system."

It has been well established that exposure to a

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single, traumatic event, or so called critical incident stress, can result in depression and suicide and other symptoms quite similar to those seen in Vietnam veterans with Post Traumatic Stress Disorder. However, EMS personnel are constantly exposed to situations that are often even more traumatic and horrible than those seen during war. Their biggest source of stress, however, is that they must often wait for up to 8 hours or more after they bring their patients to the Emergency Room before being released by a physician or hospital representative. Often this service is abused by non urgent cases, and frustration becomes intolerable as they listen to other legitimate and desperate calls for help to which they and other EMS personnel cannot respond.

American Medical News, November 16, 1992 p 35-37

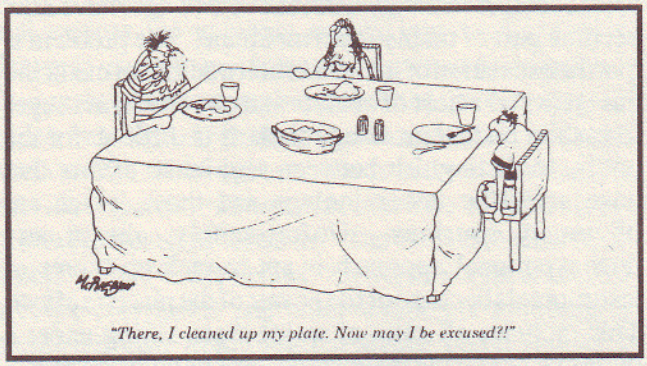
Conquering Conduct Disorder

Conduct disorder has been described as the nation's most costly mental health problem. Millions of school children have it, the problem is increasing, and it is very resistant to treatment. Symptoms include various types of anti-social behaviors, a tendency to act in a violent and cruel manner to others, vandalism, stealing, truancy, premature sexual activities, and running away from home. Kids with conduct disorder suffer from faulty perceptions, and an innocent accident such as bumping into someone unintentionally, is automatically perceived as a deliberate act of hostility which requires severe retaliation. A significant number progress to become hard core criminals as they grow older. Watching television programs that feature all sorts of violent behavior and crimes, and peer pressures are contributory factors. However, the major source of difficulties arise from stressful family conditions due to disruptive marital relationships and dysfunctional parents who have little skills in child rearing or spend little quality time with their children. Not infrequently they respond by harsh or physically abusive attempts to restore discipline, which are usually ineffective and make things worse.

The best solution appears to lie in treating both the child and family members by teaching problem solving skills that allow a consideration and evaluation of alternative interpretations to specific problems. Children are taught to learn and to rehearse non-violent alternative responses to perceived threats and parents are educated and instructed in various methods that can be used to reward these efforts, and to enforce discipline using non-violent approaches. This encourages adherence, rather than compliance with their wishes.

Following combination therapy, only 8 out of 20 children were still seriously misbehaving, compared to 11 out of 15 cases in which only the child was treated, and 9 out of 11 where it was possible to involve only the parents. Follow-up a year after treatment had been concluded revealed that half of the combined group were still behaving quite normally, but conduct disorder was evident in 13 out of 15 in the group consisting of children-only therapy, and in almost all those where only the parents had received counseling. It seems clear that there is no easy solution to this problem, that both children and family members must be involved in therapy, and that ongoing treatment is probably necessary to keep symptoms under control.

Psychology Today, March-April, 1993



"There, I cleaned up my plate. Now may I be excused?!"

Critical Incident Stress Debriefing

During the last decade, a series of supportive, crisis intervention based techniques have been developed to assist emergency personnel such as fire fighters, police officers, paramedics, nurses, physicians and disaster workers who are exposed to traumatic events. These techniques include traumatic stress education, family support programs, peer counseling, post disaster demobilizations, defusings, and Critical Incident Stress Debriefing (CISD).

CISD consists of group meetings to discuss a highly traumatic event which the group has just experienced, and is optimally conducted within 72 hours after the incident by a combined team of trained peer support personnel and a mental health professional. It is designed to lessen the impact of a traumatic event and accelerate the recovery of normal people who are having normal reactions to abnormal events. It has proven very successful in reducing stress related symptoms after traumatic events but more importantly, is effective in preventing the development of Post Traumatic Stress Disorder.

5th International Montreux Congress on Stress

Help For Stressed-Out Police

Although some occupations are perceived as being more stressful than others, job stress is usually the result of a poor fit between the worker's personality, expectations and goals, and what the job requires. Some individuals thrive in occupations that others would find extremely stressful. Increased job stress has been shown in scientific studies to be associated with higher rates of hypertension and heart attacks. The stress of police work and its relationship to heart attacks is so well acknowledged, that in New York, Los Angeles and many other municipalities, any police officer who suffers a coronary event on or off the job, is assumed to have a work related disability, and is compensated accordingly. Police personnel are five times more likely to commit suicide than civilian workers, and much more apt to be involved in family violence and disruptive relationships. A Fort Worth study revealed a 100 percent divorce rate in policewomen. Drinking is another major problem, and one out of four police officers are apt to be chronic alcoholics, compared to less than 10 percent of other workers.

Facilities have been established which specialize in helping police deal with such stress-related problems. One of the most recent is a special Unit attached to a hospital in Fort Worth, Texas. A major goal is to prevent problems by providing psychiatric and physical evaluations of cops who show early warning signs of stress, burnout, or abnormal behaviors such as a tendency to excessive violence. It also provides an inpatient treatment program for alcohol and substance abuse, and intensive counseling services for depression, family conflicts, as well as problems related to job stress. One of the early findings was that disturbed cops were more apt to have been abused as children, and this may have increased their risk for acting out violent feelings on the job and being susceptible to substance abuse problems. This new unit, which was developed as a joint effort by a police psychologist and police chaplain, is oriented towards identifying the roots of such problems and is expected to be able to handle 30 officers a day. They are careful to emphasize that going through the program will not be associated with any stigma, and that individuals who have successfully completed their treatment have had no problem being accepted by their peers when they return to duty. *USA Today, 7/6/92*

When constabulary duty's to be done, a policeman's lot is not a happy one! W.S. Gilbert *The Pirates of Penzance*

Can Electromagnetic Exposure Make You Crazy?

Exposure to electromagnetic radiation from high power lines and appliances like microwave ovens and cellular telephones have been attracting increased attention because of possible links to leukemia, and brain tumors. However, such subtle energies have also been reported to cause confusion, listlessness, and various emotional complaints. In addition to artificial sources, naturally occurring weak energy forces have long been associated with mental and emotional disturbances, particularly those connected with various seasonal winds, such as the Foehn, which has been linked with increased accidents, violent crimes and suicides for centuries. Israeli researchers now report that solar magnetic activity and natural geomagnetic forces can similarly contribute to mental illness.

Patterns of admission to a psychiatric clinic over a ten year period were evaluated and correlated with various measurements of solar and geomagnetic activity. Admissions, especially first time events, were significantly increased during months when there was high solar "radio-flux" activity and magnetic disruptions in the ionosphere. It had previously been suggested that schizophrenics and possibly manic depressives are more likely to have been born in winter and early spring, possibly because reduced positive ionization allows more cosmic radiation to penetrate the atmosphere during these months. How such weak energies might produce such effects is not clear, but could be related to altered activity of brain neurotransmitters which are known to be influenced by light and other weak environmental electrical signals. The recent discovery of the presence of magnetized iron particles in the human brain may also be relevant. The lunar cycle has long been connected with mental status, hence the term lunacy, and people who act strange, crazy, or "balmy", are often accused of having been "out in the sun too long". Recent research suggests that these observations may be much more than merely old wives' tales.

Brain Mind Bulletin, 12/92

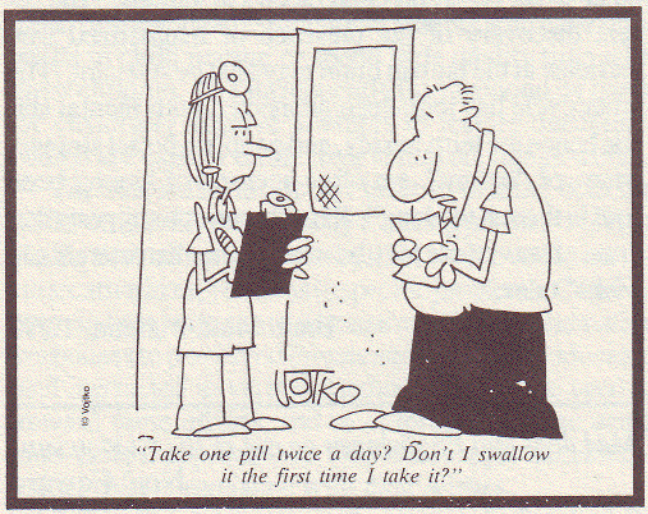
Mad dogs and Englishmen go out in the midday sun.
Noel Coward

"I Can Feel It In My Bones"

Rheumatoid arthritis patients have long claimed that they can predict future weather changes, especially storms and rain, because of a sudden increase in pain. One explanation offered is that the associated change or lowering in barometric pressure affects the fluid in joints, increasing the degree of joint swelling and pressure that aggravates their symptoms. However, a recent report suggests that patients with other chronic pain problems may also be affected by similar climatic changes. Almost 100% of patients attending a Virginia pain clinic similarly reported a connection between weather changes and increased neck, shoulder and arm pain. Most frequently cited were alterations in temperature, humidity, and the onset of precipitation, especially if changes were sudden or severe or abrupt. In addition to increased pain, the patients also linked weather changes to increased muscle soreness, joint stiffness and sleeping difficulties.

However, since these are primarily subjective complaints, scientists find it difficult to evaluate or measure such relationships. For example, it may be that some patients tend to notice the weather only when their pain worsens. Others who hear reports of impending weather changes may also start to focus on their pain, thus making it difficult to determine how much of the problem is psychological rather than physical. Whatever the explanation, for many individuals, the ancient adage "aches and pains, coming rains" may also turn out to be more than an old wives' tale.

Psychology Today March/April, 1993



"Take one pill twice a day? Don't I swallow it the first time I take it?"

The Arizona Stress Syndrome?

Many arthritis patients move to Arizona because the warm and dry climate appears to significantly reduce joint pain and stiffness or even cause it to disappear for some sufferers. However, it is also conceivable that a more casual, and stress-free lifestyle could contribute to a quiescence of these complaints, as well as an improved quality of life. Support for this comes from rheumatologists reporting that there is often a rapid return of symptoms when orderly and peaceful lifestyles are disrupted by visits from children and grandchildren. Although such interludes may be most welcome and eagerly awaited, their associated interference with normal routines and activities, and the introduction of new demands, seem to precipitate an abrupt and unexpected flare up in arthritic complaints that had not been experienced in years. According to one specialist, when he sees arthritic senior citizens who have been in complete remission for over 12 months, and who have no other health problems, he looks for "The Arizona Stress Syndrome". This is defined as "the rapid reappearance of arthritic complaints and other symptoms following a protracted visit from children and/or grandchildren." The syndrome can be precipitated not only by visitations that cause distress, but also long awaited and completely joyous events. It has long been observed that psychosocial stress can play an important role in precipitating and aggravating arthritis, and as the Phoenix rheumatologist who first described the association noted, "stress can be both positive and negative".

Psychology Today, March-April, 1993

Fish and visitors smell after three days.

Benjamin Franklin

Making Sense Out of Scents

Scientists have often wondered why the distinct perception of a specific odor seems to quickly fade, although new scents can be clearly appreciated. Thus, you can very quickly detect a gas leak on entering a room, but your awareness of it rapidly vanishes despite continued exposure. Similarly, while the fragrance of lilacs might be overwhelming when first walking through

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a garden, the aroma only lasts a short time, although the scent of gardenias, or roses will be readily recognized. The reason for this appears to be that as soon as receptors on the surface of cells in the nose register a certain odor, they are inactivated by an enzyme known as Beta-Adrenergic Receptor Kinase, or BARK. Other types of BARK can be found throughout the body, and also appear to have the ability to tell various receptors when they have been exposed to a sufficient amount of a particular stimulus, rendering it resistant to any further activation by this specific incitement, but not others. Thus, in addition to effects on olfactory stimuli, BARK enzymes also appear capable of desensitizing cell receptors to hormones and other chemicals, including drugs.

Researchers have been able to demonstrate that when olfactory cells are stimulated by an odor, they react within five hundredths of a second. The presence of a BARK inhibitor can turn off this response within a tenth of a second, allowing the receptors to be able to detect any new or different stimulus. However, if BARK blocking antibodies are administered, the olfactory cells cannot be inactivated, and will continue to recognize and register the same scent signal. These discoveries may have important clinical applications. It has been shown that when some asthma patients are given adrenalin to reduce wheezing, the medication may lose its effectiveness if enough adrenalin receptors get turned off by a BARK. If it were possible to inacitvate these particular BARK actions with specific inhibitors, adrenalin and other hormones and drugs might be more effective. As we grow older, our sense of smell declines, and administering BARK antagonists might prevent this, and improve the ability to detect dangerous smell, like gas or smoke. In one sense, therefore, as far as senior citizen scents are concerned, BARKS may indeed determine their bite.

New York Times, 2/23/93

Cosmic Energies and Sudden Death

Prior research has demonstrated a link between geomagnetic forces and blood pressure, disturbances in heart rate and rhythm, and blood clotting. Scientists have long been interested in such cosmic influences on these and other biological activities, but it is only within the past decade that extremely high powered computers, satellites, and long range telescopes have made it feasible to study some of these relationships with greater precision, confirming many previous suspicions. In one recent study of sudden cardiac deaths occurring during 180 consecutive months from 1974 to 1988, it was found that there was a significant correlation with increased geomagnetic activity levels. For some reason, the association appeared to be primarily only with heart attacks involving the front wall of the heart. In examining this further, researchers discovered that the nerve fibers to the right coronary artery, which supplies blood to the front of the heart, respond much greater to such geomagnetic influences than those innervating the vessels responsible for nourishing the back of the heart, further supporting a causal atmospheric connection.

Bad weather, and rapid changes such as those associated with impending thunderstorms may also help to precipitate sudden death due to rupture of blood vessels in the brain. A Connecticut study compared stroke occurence with hourly weather data, and found that almost every male stroke victim had been admitted within 72 hours of bad weather, with almost half occurring in November and December. It is believed that thunderstorms, rapid changes in barometric pressure, falling dew point and temperature shifts could have effects on blood pressure and/or blood viscosity which can weaken blood vessel walls, thus making them more susceptible to rupture.

Cardiology World News, Nov.-Dec., 1992
USA Today, 3/15/93

A cloudy day, or a little sunshine, have as great an influence on many constitutions as the most real blessings or misfortunes.

Joseph Addison

The Definition of Stress:

The confusion created when one's mind overrides the body's basic desire to choke the living shit out of some arsehole who desperately needs it!

Kathryn Marsden

Book Reviews • Meetings and Items of Interest

Book Review

Stress Management For Elementary Schools, Humphrey, J.J. Charles C. Thomas. Springfield, 1993. No. of pages: 181. Price $39.75.

As noted in the Foreword to this much needed volume, childhood stress has now reached pandemic proportions, extending far beyond the conventional confines of inner city populations. "It is now not unusual to see fierce competition along with other signs of Type A coronary prone behavior at the nursery school level, anxiety attacks by age nine, and even ulcers in kids under age twelve". Childhood, as we formerly knew it, is rapidly becoming extinct. There is less and less time available for learning how to develop social skills and meaningful friendships. Computer games and television programs that emphasize rapid and destructive activities have replaced the more leisurely and constructive pastimes of constructing things with Erector sets and Lincoln Logs that previous generations enjoyed. Parents have less and less time to spend in child rearing, many lack these skills, and their position as role models has been replaced by incongruous and inappropriate TV and movie characters that are as unrealistic as they are unsavory.

Because of diminished parenteral influence and increasingly disruptive family lifestyles, it is particularly important for elementary school teachers to shoulder the responsibility for teaching youngsters proper goals, values and conduct. Teachers need to be educated about the sources, early manifestations and extent of childhood stress, and its tragic personal and social consequences. They must be provided with a curriculum and other tools that will allow them to develop the skills and strategies needed to stem this growing epidemic. Most importantly, they themselves must learn how to serve as effective role models, so that they may recapture the former prestige, dignity, and stature of their profession.

This volume, written by an outstanding educator in the field, goes a long way in fulfilling these needs. The eleven chapters provide a thorough discussion of relevant and important issues such as "Dealing With Childhood Emotions", "Home and Family Stress", "School Stress", "Stress Among Children With an Affliction", "Teaching Children About Stress", "Classroom Stress Reduction Exercises", "Games and Stunts That Reduce Stress", and "Reducing Stress Through Creative Relaxation". Included are instructions on how to implement time tested relaxation techniques especially designed for children such as *Kiddie QR* developed by the Stroebels, and Benson's *Relaxation Response*. The writing is clear, and the References are complete and up to date. This book should be required reading for all elementary school teachers, and is highly recommended for anyone interested in the growing and serious problems associated with stress in children.

Meetings and Items of Interest

May 30-June 1 Vth International Conference of The International Society for The Investigation of Stress (ISIS), Corrib Great Southern Hotel, Galway, Ireland (Eire) Contact: ISIS Central Office, Department of Psychiatry, University of Melbourne, Austin Hospital, Heidelberg, Australia, 3084 Fax: (61 3) 459 6244

June 6-9 Shadyside Hospital - 1993 Meeting of the Academy of Behavioral Medicine Research: Behavior, Health and Aging, Nemacolin Woodlands, Farmington, PA (412) 623-2393

June 11-13 Harvard Medical School, Massachusetts General Hospital, Department of Psychiatry - Psychiatric Disorders Associated with Female Reproductive Function, Copley Plaza Hotel, Boston (617) 432-1525

June 23-26 Become A Stress Trainer, 5th Annual Conference, Donner Lake, CA. Contact Dr. Edmond C. Hallberg, 470 West Highland Ave., Sierra Madre, CA 91024 (818) 355-1325

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