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the attitude of parents towards their offspring is described as "normal". From the usual neurotic symptoms of childhood, only one, stubbornness, was reported and this in three cases only. With respect to adulthood, most members of the control group described themselves as optimistic and cheerful individuals, creative and always free to give vent to their feelings. Furthermore, all members of the group reported keen interest in individuals of the opposite sex and harmonious sexual relations. Out of the 25 persons in this group, only 3 reported use of alcohol.

It is worth mentioning that, in vivid contrast to the cancer group, none of the control patients reported any kind of stress before the onset of their illness. In general, control group members firmly impressed the examiner as "normal" completely articulate about their own feelings and ideas.

The psychological exploration (T.A.T.) of the two groups members resulted in the following findings:

In a large number of cancer victims, the patients gave a very poor image of themselves. Another frequent finding was the deprivation and poverty experienced by many cancer victims during childhood. At the same time, a considerable percentage of patients revealed disturbed intra-family relations and on the whole unpleasant childhood experiences. Parental figures were described as rejective or oppressive. This referred more to the mother, against whom feelings of aggressiveness or outright rejection were expressed, than to the father, who is mostly described as shadow-figure, lacking real presence.

Cancer sufferers described their "heroes" (with whom they identified) as inert, inconsiderate and pessimistic individuals, unable to reach any decision by themselves and tormented by a strict superego. Their own aspirations in life were humble, they lacked motivation, were passive and appeared dependent always in need of assistance and very frequently expressing self-destructive tendencies.

With respect to libidinal adaptations, the test revealed problem-ridden sexual relations, difficulties with or no orgasm at all.

On the whole the personality of cancer patients, as portrayed by the findings of the test and questionnaire, is characterized by an inadequate ego, guilt feelings, continuous anxiety, immaturity, inefficient defense mechanisms and finally a total inability to express these negative feel-

ings. Cancer sufferers also seem unable to make up their minds, being fatalists, defeatists and great pessimists. Another interesting finding of the T.A.T. cancer protocols is the formulation of a few but definitely unrealistic responses. Vividly contrasting neoplastic test protocols, the T.A.T. of control group members showed a much less unhappy childhood or early infancy. The patients had a good image of themselves and a relatively adequate ego. Guilt feelings or anxiety were minimal and, on the whole, the persons interviewed seemed capable of coping with everyday problems. Furthermore, interpersonal relationships appeared healthy and the individuals investigated seemed to have no problems in their heterosexual relations.

Finally, protocols of control group members showed no need for reassessment, or reassertion of ego or increase in dependency. These individuals appeared very optimistic and sure of themselves.

#### Conclusions

Although the size of the groups studied was relatively small, we are under the impression that our research definitely warrants certain conclusions. The vivid contrast of the two groups examined and the striking resemblance of our findings with those of most research workers, like LeShan, Kissen, Booth, Bahnson and Bahnson, Baltrusch and others is, we think, a further argument in favor of the validity of our data.

On the whole, cancer patients seem to possess a personality structure markedly different from that of the average person. Disturbed childhood, frequent divorce of parents, deprivations of many kinds, parental rejection or overprotectiveness, considerable neuroticism and abundant anxiety are the main features of the character of neoplastic sufferers. Sexual relations are poor, difficult or unsatisfactory. Furthermore, psychological investigation of the personality of these individuals shows that they are pessimists, defeatists, with inadequate ego power and an insatiable need for dependency.

On the other hand, some cancer patients display psychotic responses, a marked lack of activity and energy, passivity and submissiveness.

We also consider of utmost importance the finding that intense mental stress, like that which follows the loss of a beloved person, invariably precedes the clinical manifestations of the neoplasm—a fact also ascertained by many other researchers.

Thus, clarifying the personality structure of cancer patients, with its mixed

## RELAXATION TRAINING IN THE CONTROL OF HIGH BLOOD PRESSURE: A Report on Techniques

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A new approach to the traditional medical treatment of cardiovascular disease and cancer is the addition of psychological counseling and relaxation/meditation training. There is a growing interest in how the patient can participate in symptom management. To mention only a few, Carl and Stephanie Simonton's *Belief Systems and the Management of the Emotional Aspects of Malignancy*, Meyer Friedman and Ray H. Rosenman's *Type A Behavior and Your Heart*, and Bertha Rogers' *The Well of Your Mind—Serve Yourself* have examined the causal relationship between states of mind and physical states. Beata Jencks, J.H. Schultz, and Lulu Sweigard have reported on the mental training of athletes and the use of suggestion to relieve circulatory problems.

These authors demonstrate that the patient can learn to control levels of awareness and muscular activity in ways that lead to improved mental and physical performance. My most recent work has been in the use of relaxation techniques, particularly a form of guided meditation and autogenic training, to regulate specific bodily functions. The question I posed is whether high blood pressure as a result of cardiovascular disease can be regulated by the patient just as a professional golfer (Greenleaf, 1977) can be trained to control the level of tension.

Studies done in the United States and England have demonstrated that biofeedback training (with machines) and meditation have been used with some success to teach individuals to lower their blood pressure to levels of comfort. What I

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anal and oral elements, its psychosexual immaturity, its passivity, its negative feelings and the subject's inability to thwart any of these—in vivid contrast to the personality structure of individuals beyond the Psychosomatic Illness Continuum—fully justifies the present study. ■

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hoped to do is to take what is known, i.e., that thought processes can positively influence an imbalance in the physical system, and develop a methodology which can be taught quickly and adapted to the individual in terms of life-style, mental sets, and body types. Beata Jencks' *Your Body-Biofeedback at its Best* (1977) and others have described the limited effectiveness of training humans with machines. This has led me to seek procedures which will eliminate dependence on machinery and special circumstances.

The methods presented here evolved as a result of my training in kinesiology and hypnosis and have been used in private practice with professional athletes, stressed patients being prepared for surgery and anxious, under-achieving students. In addition to success in these areas, exploratory work with hospitalized psychiatric patients has indicated relief with relaxation training from somatic symptoms due to anxiety.

The purpose of relaxation training is to teach the patient to modify emotional responses in order to increase well-being—this includes goals of mental and physical accomplishment. In this instance, I wanted to see if a combination of progressive relaxation, suggestion, imagery, and autogenic training would produce short term and/or long term results in training a hypertensive patient to control his blood pressure.

The approach to treatment presented here is based on J.H. Schultz's Autogenic Training Exercises, Beata Jencks' Breathing Exercises, and Lulu Sweigard's Ideokinesis. All three are meditation related forms of behavior modification. Each system incorporates guided imagery to re-condition habitual physiological response and uses a state of passive concentration to bypass conscious interference with sub-cortical functions.

The Standard Autogenic Training originated in Germany with J.H. Schultz. It is a series of exercises, executed in a state of passive expectancy, which are developed from within the self. There are six exercises: one, the feeling of heaviness in the extremities; two, the feeling of warmth in the extremities; three, attention to the heartbeat; four, attention to respiration; five, internal warmth; and six, coolness of the forehead. The regular practice of these exercises, about four minutes in duration, it is claimed brings about a long term re-conditioning of the autonomic nervous system. The changes brought about through this conditioning

diametrically oppose those evoked by stress.

Jencks' Breathing Exercises, (developed by Beata Jencks, a physiological psychologist, in Salt Lake City, Utah) is a method that coordinates thought processes with respiration. She describes (Jencks, 1977) a psycho-physiological method of relating physical, physiological and psychological feelings, actions, and images to breathing patterns. The combination of specific thoughts and images with inhalations and exhalations encourages one spontaneously to develop certain moods, levels of energy, and mental awareness. The exercises evolved from clinical practice and research in the treatment of stressed, psychosomatic patients as well as a wide variety of students and professionals. As each exercise can be performed in a minimum of time and space, her patients report on the effectiveness and convenience of the treatment.

*Human Movement Potential, the Ideokinetic Facilitation*, by Lulu Sweigard, (1974), reports on a teaching system that evolved from years of experimental and clinical work with athletes and dancers. Ideokinesis refers to a method of stimulating the nervous system to select the most efficient neuromuscular pathways to reach a specific goal by enlisting the mind's ability to imagine the particular goal. This coordination makes clear distinctions between useful voluntary controls of muscular activity and voluntary controls that result in a waste of energy and inefficient neuromuscular habits. The emphasis is on training the student to concentrate on images of movement in space or imagined movement within the body. The use of an idea as effective stimulation for internal and external activity has produced significant results in neuromuscular re-coordination for a variety of amateur and professional physical goals and problems.

What I observed in these approaches is how to utilize the distinctions and interactions of physiological and psychological phenomena. This in two ways became an integral part of my work with patients. One, it is possible to direct input for specific results—just as there is body language, the body also listens; and two, there are exercises to teach the patient how to assume responsibility for efficient, appropriate, and comfortable psycho-physiological activity. It is through strategically directed verbal input while the patient is in a state of passive concentration that realistic, responsible, and positive images can begin to replace helplessness, dependency, and under-

achievement.

Most of my work is addressed to people who are in some form of mental or physical distress. Usually there is a quality of personal hopelessness about their condition, frequently accompanied by dependence on drugs and the desire to be taken care of. To avoid automatic resistance to an approach based on personal responsibility, I pay close attention to individual history and the patient's perceptual system in order to initiate a relationship based on what is acceptable to the person (whether the patient operates in a visual, auditory, or kinesthetic representational mode is taken into immediate consideration).

I begin treatment by modifying mental and physical discomfort through guided progressive relaxation. The patient learns to experience sensations of muscle relaxation through structured exercises based on Jencks' Breathing. Directed thoughts, feelings, and images are used to achieve short term and long term goals according to the therapeutic contract. New material is introduced when there is successful integration of presented information. The objective is to make it increasingly difficult to maintain past and present self-defeating attitudes in light of objective and subjective changes of well-being and knowledge.

As the patient experiences deep relaxation and narrows attention, I have observed facility in re-directing negative mental and physical attitudes. During a deeply relaxed or highly focused state, suggestions for recall of positive memories and goal-oriented imagined fantasy are made. It is suggested that since dreams and reality equally can produce strongly felt emotion, one can create, through guided mental rehearsal, feelings, dream images, and ideas that will become a powerful influence on health and well-being. The emphasis is away from chance occurrences which lead to comfort or discomfort toward choosing what will be directly related to the expressed goals of the therapeutic contract.

Depending on the resistance and anxiety involved, direct or indirect support, encouragement and suggestion will be more appropriate. I find it is strategic to point out, while the patient is in a state of passive concentration and expectancy, that all forms of progress and experience are acceptable. I will use such phrases as "when you are ready to feel more comfortable, but not before," "there is nothing for you to try and do, nothing to try and feel," "in your own time, as you can choose," "while you may not have conscious understanding of

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this, your body is now able to . . ." and "even though you may consciously forget, you will be unconsciously reminded."

I am therefore giving the patient permission to proceed in his own time (a truism) and simultaneously underlining the patient's responsibility in becoming ready to choose to make progress. I point out through indirect phrasing that one has chosen to feel a certain way in the past (negative and un-well) by the repetition of particular thoughts and now the ability has been developed to reverse the process and choose to feel differently (positive and well) in the present and future.

For those of you who are familiar with Milton Erickson, Ernest Rossi, and Sheila Rossi (*Hypnotic Realities*, 1976) will recognize the use of phrasing to formulate therapeutic binds, to engage the right hemisphere or unconscious processes, and to dissolve habitual causal relationships.

Feeling relaxed and comfortable while being reminded that one is responsible for one's own good experience, may of itself relieve certain problems. However, my particular interest is in using the relaxation experience to teach control of specific bodily functions. The basic strategy I am postulating utilizes the state of passive concentration and expectancy to depotentiate habitual feelings, ideas, and resistance in order to present new information and direct experience to change the patient's way of relating to his physical well-being. The patient is taught to use certain images to trigger specific mental and physical responses. Observable and undeniable changes and progress are pointed out. Through direct and indirect suggestion, the patient is able to form new associations in order to assume responsibility and to continue to develop the ability to be in charge of thoughts and feelings. The objective is for the patient to reverse the cycle of dependency and helplessness toward independence and choice. The role of the therapist in this model is to teach what choices are available and a method that includes motivation and techniques for achieving independence.

With the cooperation of the Director of Medicine in a private hospital, I was able to use the method of treatment that has been described. The goal of treatment was to teach a patient to control high blood pressure with his imagination. (No biofeedback machinery was used.) This

was the contract, agreed upon by myself, the physician, and the patient and it was to be carried out through relaxation training.

The patient, male, early 60's, high school teacher was described in part, by his physician as an individual deeply concerned with doing his job well and equally concerned about his blood pressure. My observation at our first meeting was that he was outwardly calm with a great deal of internal agitation. No psychological testing was done, nor were any tests made of hypnotic suggestibility. We did exploratory work to see if he could recall past memories of physical health and mental security. This was positive. I also observed that he functioned perceptually in a visual mode.

The patient was referred to me for relaxation training by the Director of Medicine. The patient had a heart attack one year prior to our meeting and while he had made good initial progress, some problems were developing. Repeated changes of medicine and dosages were no longer effective in maintaining his blood pressure at a normal or comfortable level. The exercise program at the hospital had ceased to be helpful and had become a situation of great stress. The patient's hypertension showed wide fluctuations related to his level of anxiety. The specific component of anxiety in his blood pressure response indicated to his physician that another change in medicine would not be desirable to effect improvement.

Sessions were scheduled with the patient at the hospital twice a week for a month, then once a week for a month, with a follow-up after six weeks without meetings. His medicine remained constant throughout. The patient missed three appointments and had a total of ten sessions. Each meeting was approximately one half hour long, with a deep relaxation session about ten minutes in length. The patient's blood pressure was taken by a technician in the EKG department before and after each meeting. He had reported that his blood pressure was always highest on his right arm when, taken in a sitting position. For the purposes of this training, his blood pressure was always taken on his right arm while he was sitting. No efforts were made to relieve his anxiety in the hospital setting.

Four magnetic tape recordings were made for the patient, based on what was done in the deep relaxation part of each meeting, for different goals in physical comfort and mental relaxation. Specific suggestions were made for more normal, more comfortable blood pressure and in-

creased enjoyment of doing relaxation exercises. The emphasis was on passive concentration during deep relaxation--with nothing to try and do or try and feel. The patient was given a prescription to do a 90 second relaxation exercise (Jencks' Breathing) five times a day with the suggestion that he would be consciously or unconsciously reminded to do them. Tapes were to be listened to at night and a four minute autogenic exercise practiced each morning--or when the patient chose.

The patient reported doing the relaxation exercises whenever necessary, even without thinking about it. He described listening to the tapes as "meditation with something positive to think about." In three weeks of treatment, he reported more physical comfort. After six weeks, he expressed that he was less concerned with anticipating difficulties in all areas of his life because he knew how to "think about positive things and let go of tension." His flushing disappeared almost completely. When it would reappear, he "stood in front of a mirror and watched it disappear in seconds while doing a relaxation exercise." Originally afraid of becoming dependent on our sessions, the patient is now pleased that he is in control of how he feels without my direction. His wife reports that he is more at ease around the house--that "all he needed to do was learn how to relax, he never knew how before." The patient's wife had been included in one relaxation session to engage her cooperation in listening to the tapes and she later reported doing relaxation exercises in difficult situations.

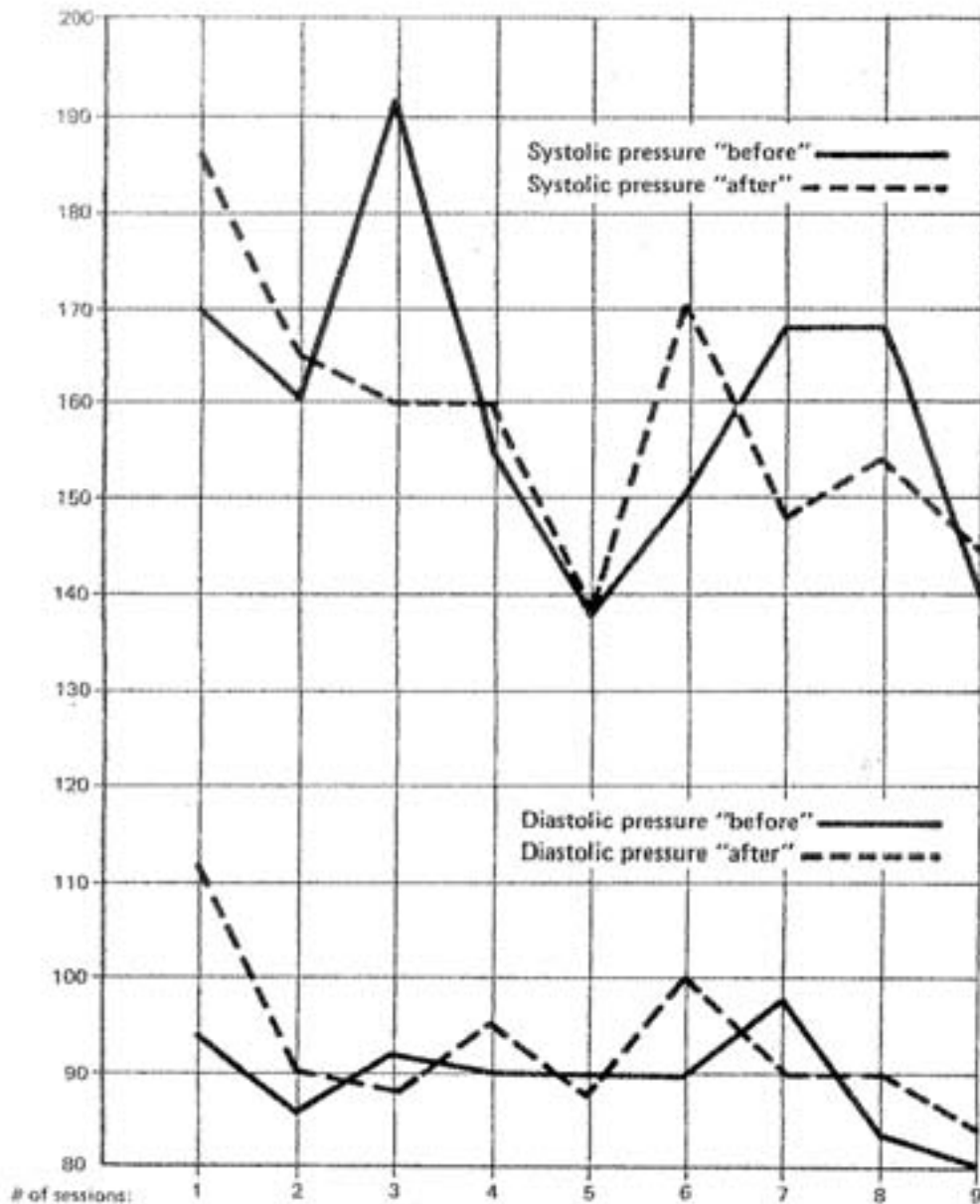
One of the most significant examples of the patient's ability to handle a stressful situation was demonstrated during hospital blood pressure testing which had always been a source of great agitation--especially when taken by his CPR instructor. At the end of our treatment sessions, the patient was able to maintain a comfortable blood pressure level even with

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RECORDING OF PATIENT'S BLOOD PRESSURE BEFORE AND AFTER RELAXATION TRAINING SESSIONS



# of sessions:	"Before" BP	"After" BP
session 1	170/94	186/112
session 2	160/86	165/90
session 3	192/92 (CPR NURSE)	160/88
session 4	155/90	160/95
session 5	158/90	138/88
session 6	150/90	170/100 (CPR NURSE)
session 7	168/98 (CPR NURSE)	148/90 (CPR NURSE)
session 8	168/84 (CPR NURSE)	154/90 (CPR NURSE)
session 9	140/80	145/84

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the CPR nurse.

While a graph is included, it is helpful to note certain aspects of the results. At our first meeting, prior to any relaxation training, the patient's blood pressure was 170/94. After that session, his blood pressure was 186/112. This increase seemed consistent with his intense anxiety over blood pressure performance. Much of my treatment plan was later aimed at this problem of "performance" and his emphasis on trying hard when it was inappropriate to his goals.

The average of the "before" session pressures thereafter, excluding two sessions to test management of extreme anxiety with the CPR nurse, was 158/88, a range of 132-192 systolic and 88/92 diastolic. The marked rise before and after one session in diastolic pressure seen in the first meeting (18mm) was not seen on any subsequent visit. The change from before the session to after the session, either increase or decrease, averaged 5.9mm from session two through session nine. This indicated that the patient learned to maintain a more stable level of blood pressure and was not dependent on the deep relaxation of the session for his blood pressure to drop to a more normal level. Included in this average are the pressure readings taken by the CPR nurse. Even though there was an initial rise in pressure with her, the fluctuation was not extreme.

The patient's blood pressure, taken by the CPR nurse at (October 13) session three was 192/92. When she took his pressure reading (on November 1) at session six, it was 170/100. These readings were notably different from those taken by other members of the EKG staff. Everything was going so well in terms of his over-all comfort and reaction to the hospital setting, that the patient and therapist agreed to do an experiment regarding the CPR nurse. During his state of passive concentration, he was given the suggestion to use the phrases "my mind is calm, my mind is serene, my mind is comfortable," and "calm, serene, comfortable" as thoughts which would lower his blood pressure to a more normal, more comfortable level while his pressure was being taken. The reading before the session when he was given the above suggestion was 168/98 and after the session, using the formula, it was 140/90. At the following meeting, using the formula with the CPR nurse, his pressure was 168/84 "before" and 154/90 "after." Since these pressures were taken by the CPR nurse, it was felt that his control under stress had

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dramatically improved.

In measuring the effect of anxiety on the patient's blood pressure, certain observations may be made. Relaxation techniques, incorporating direct and indirect suggestion, progressive relaxation, imagery, and autogenic training were taught to the patient in a short period of time and with some pronounced positive results in keeping with the therapeutic contract. At the conclusion of treatment, the patient had a method of reducing his anxiety in a variety of situations and controlling his blood pressure. He will continue, at times, to experience mental stress and physical distress, but he now has a self-motivated control system and an ability to restore his functions to a comfortable level so that anxiety does not interfere with his well-being. ■

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