

Stress management — an integrated approach

— G Mitton



Dr Geraldine Mitton, MChB, DCh
Cleto Saporetti Foundation
PO Box 2325
Stellenbosch
7600

Curriculum vitae

Geraldine Mitton studied at the University of Cape Town and spent several years at the Red Cross Children's Hospital before moving to Groote Schuur Hospital where she was Head of the Emergency unit for 7 years. She is co-editor of the book "Pitfalls in Primary Health Care". She has a great interest in anthropology and has been on several expeditions to Borneo, Malaysia, the Philippines and Papua New Guinea. During 1987 she studied Traditional Chinese Medicine and Acupuncture in XI'AN, an ancient capital of China. She is currently director of the Cleto Saporetti Foundation and is involved in research and teaching of preventive health, nutrition education, and life style modification.

South Africa has one of the highest levels of stress related illness in the world. Our problems are unique — the racial and political situation is creating distress for black, brown and white, both executives and employees, housewives and university academics, adults and children. Stress is intensified and catalysed by economic problems and double digit inflation.

Summary

South Africa has one of the highest levels of stress related disease in the world. Problems include racial and political tension, double digit inflation, and dualistic economy. Management of stress requires a holistic approach — with treatment directed towards mind and body, as well as teaching strategies to cope with the social, family and working environment. A full medical assessment, including lipid profile will identify cardiovascular risk factors, with Computerised Health Risk Appraisal an excellent tool in promoting life style modification. Counselling in effective communication and interpersonal relationships on nutrition and healthy lifestyle will help to identify stressors and introduce coping strategies.

S Afr Fam Pract 1988; 9: 500-3

KEYWORDS: Stress; Life Change Events; Physician, Family.

What is stress?

The definition evolved by pioneer researcher, Hans Selye is: "Stress is the nonspecific response of the body to any demand made upon it".¹ Stressors may be biological (physical trauma, excessive alcohol intake, smoking, poor diet) or they may be psychological (fear of failure, negative feedback, promotion) social, political and en-

vironmental stressors (work overload, financial problems, group areas).

Holmes and Rahe,² have devised a Social Readjustment Rating Scale in 1967 which consists of 43 items indicating life events each with a corresponding rating of stress points.

Events such as death of a spouse and divorce are the most stressful events, and people who scored highest in life change units were found to develop stress related illness in the succeeding year.

Some people are able to cope better than others with stress and are able to turn the challenges and crises of life into "eustressful" responses, (where "eu" means well), rather than distress.

Selye¹ suggested that there are 2 main types of people: the "race horses" who only thrive on an energetic, fast paced lifestyle, and the "turtles" who require peace and tranquillity.

With eustress we have a healthy level of stress. Homeostasis is maintained by rapid recovery from the effects of unavoidable stressors.

This stress-relaxation response and subsequent risk factor reduction is an important component of the programme to be described.

The General Adaptation Syndrome as described by Selye has 3 stages: The Alarm stage — 'fight or flight' response, the Resistance stage, and the Exhaustion stage after long exposure to stressors without adaptation. This has been modified by Nixon who described the Human Function Curve showing the relationship between work pressure and performance. A healthy life style avoids the

South Africa has the highest levels of stress-related illness in the world

distress and boredom of underload as well as the "burnout" and exhaustion of overload.

The Type A personality tends to work too high on the curve. When excessive demands occur, sleep is neglected, there may be excessive use of alcohol, caffeine and other stimulants, neglect of physical activity, leisure and family life with resulting breakdown and exhaustion.

The chronically stressed person develops somatic symptoms (ulcers, migraines, hypertension, insomnia, and decrease in libido), psychogenic symptoms (impaired concentration and decision making, irritability, frustration, depression, lack of motivation) and sociogenic symptoms —

(conflict in the home and at work, lack of communication).

To summarise —

Stress overload = Reduced ability to enjoy life to its fullest (if it does not kill first!).³

Stress management requires a holistic approach addressing both mind and body. Multi model programmes are more effective than applying individual therapies.

The ideal approach would involve an inhouse workshop lasting at least one week, in 3 stages:

Stage I: Identify problems, and commence health education

Stage II: Relaxation and specific therapies

Stage III: Introduce coping strategies.

The unique racial and political situation creates additional distress for all races at all levels of employment.

The professional team should ideally include doctor, nutritionist, psychologist or communications expert, and a physical education teacher or biokinetician.

The plan can be modified and adapted by most general practitioners, by calling in or working together with other health workers, for example the country doctor may enlist the help of community health nurse, or social worker. This multidisciplinary approach has been the trend in the United States where one finds many Health Maintenance Organisations and clinics and hospitals offering "wellness" Programmes where full medical assessment, combined with fitness profile and lifestyle packages are offered.

Stage I — Identify problems and commence health education

Each patient should have a —

1. *Medical assessment* with a full psychosocial history, resting ECG, weight and blood pressure check, urine analysis and blood chemistry with particular attention to the lipid profile. A dietary history is important, and also the amount and quality of exercise taken.

2. *Fitness Profile* — If an exercise physiologist is available it is very useful to do a full fitness profile. This would include measurement of body

composition and percentage fat, physical work capacity, muscular strength, endurance and flexibility which are assessed to give an overall index of fitness, and an estimation of target weight.

A prescription for aerobic exercises can be given by the doctor according to the following principles:

Frequency: 3 — 4 times weekly

Intensity: 60-80% of the maximum heart rate ($220 - \text{Age} \times 60\% - 80\%$). For example, patients on beta blockers, or those with medical problems should exercise at 60% of their heart rate.

Time: 30-60 mins of continuous activity

Type: cycle, jog, swim, row, circuit training.

The doctor should explain the benefits of exercise. Apart from its effect on weight loss and improvement in cardiovascular risk factors by reducing triglycerides, LDL cholesterol and increasing the HDL cholesterol, exercise is an excellent tool for treatment of depression and anxiety.

Physical fitness programs are also cost effective.

3. *The Health Risk Appraisal*⁴ is a computerised personal questionnaire which is a useful counselling tool in promoting life style changes. The answers to questions regarding an individual's health related behaviour are compared to mortality statistics and epidemiologic data, to estimate the individual's risk or probability of dying at some future time.

For example, risk factor levels for the top 12 causes of death, of 10 year mortality rates for the individual appraised and as could be achieved, are given. In addition, three ages — actual, appraised and achievable, may be estimated. The achievable age is based on the individual following recommendations for life style changes.

“Stress is the non-specific response of the body to any demand made upon it”

4. *Nutrition counselling* is important. The patient should be advised to follow a prudent diet, to eat three meals per day and not to skip meals, is advised to eat plenty of vegetables, salads, fruit and whole grains and to cut down the amount of saturated fat and cholesterol containing foods. Salt should be avoided, as should sugar and all refined foods. Caffeine in excess may produce symptoms simulating anxiety neurosis, insomnia,

headaches and nausea, irritability, palpitations, and arrhythmias. Individual tolerance to caffeine varies, but in general an intake of 300 mg (3 cups of coffee) or more may produce these symptoms.

There is also a positive correlation between coffee and cholesterol levels. Patients suffering from stress related illness should be advised to avoid any caffeine containing beverages — this includes tea, coffee, cola drinks and cocoa. Advice regarding smoking cessation and moderate use of alcohol should be given.

Relaxation enables most people to effectively cope with stress

Stage II — Relaxation and specific therapies

Here we have a wide variety of therapies available. Relaxation enables the individual to effectively cope with stress, relieve tension headaches, insomnia, hypertension, bodily aches and pains and excessive fatigue. The individual has less need to engage in stress induced behaviour — such as excessive alcohol consumption, smoking, and compulsive eating.

Progressive Relaxation is a technique introduced by Jacobson in 1938⁵. By systematically tensing and relaxing various muscle groups, and by learning to distinguish between the feeling of tension and relaxation, an individual may almost completely eliminate muscular contractions and experience a feeling of deep relaxation.

It is a skill which must be learned, and can be combined with breathing exercises, visualisation and Autogenic Training. This latter technique, taught according to the method of Luthe and Schultz⁶ is a series of mental exercises or auto suggestion focussing the mind on sensations of heaviness, then warmth in the arms and legs, easy deep breathing, abdominal warmth and cooling of the forehead. Once learned, the patient may practise at home three times a day after meals for about 10 minutes.

Medication and yoga similarly induce sleep relaxation and inner calm as do postural therapies such as the Alexander Technique, and the Feldenkrais method.⁷ Other therapies such as massage and hydrotherapy are excellent forms of relaxation.

Biofeedback,⁸ using bioelectronic instruments, provides a technique for learning about control of the autonomic nervous system, and can be used

for relaxing various muscles in a state of chronic tension, for migraine, for hypertension, asthma, spastic colon and irritable bowel syndromes. The use of EEG biofeedback is concerned with mental and emotional relaxation, and can be combined with imagery and visualisation.

Instruction in Right Brain Enhancement is useful in promoting relaxation via art and music appreciation, increasing creativity and imagination, and ultimately increased productivity. It has been found that stressed people are often Left brain dominant, and by encouraging use of the Right brain, a sense of balance is achieved.

Stage III — Introduce Coping Strategies

Counselling will help the patient with conflict resolution, interpersonal relationships, time management, assertiveness skills, life and career planning, and goal setting. Self awareness leads to effective self management. The transformation from merely coping to thriving is facilitated by good nutrition, adequate physical exercise, enough sleep, relaxation, and supportive relationships.

Kobasa⁹ describe the "Hardy Personality" as one who manages to stay happy and healthy in the face of many demanding life style changes. Their research suggests that stress-resistant people have three very positive attitudes towards life.

1. Life is a *challenge* — there is an openness to change, which is regarded as an opportunity for selfdevelopment.
2. *Commitment* — a feeling of involvement in whatever one is doing.
3. A sense of *control* over events in one's life.

To be flexible under stress, one must 'Roll with the punches'.

German philosopher Nietzsche wrote: "He who has a 'why' can endure any 'how'." People need a reason for being, a "why" that adds a dimension and purpose to their lives.

It is obviously not possible to apply all the therapies outlined to all levels of society. The general practitioner should choose whichever are appropriate, and work together with a multidisciplinary team while maintaining his position as team leader and principle care giver.

To be flexible under stress: Roll with the Punches!

References

1. Selye H. Stress without distress. Lippincott, New York 1974.
2. Holmes T H, Rahe R H. The Social Readjustment Rating Scale. J Psychosom Res 1967; 213-8.
3. Zimbler A et al. Conquering Corporate Stress Divaris, 1985.
4. Milsum J. Health Stress and Illness. Praeger, 1984.
5. Jacobson E. Progressive Relaxation. University of Chicago Press, 1938.
6. Schultz J, Luthe W. Autogenic Training: A Psychophysiological approach in Psychotherapy. Grune and Stratton, New York, 1959.
7. Feldenkrais M. Awareness Through Movement. Harper and Row, 1972.
8. Marcer D. Biofeedback and Related therapies in clinical practice. Croom Helm, 1986.
9. Kobasa S. Stressful life events: an enquiry into hardiness. Journal of Personality and Social Psychology 1979; 37.

From the Journals

Think about this

Pulse's August 1988 (Heart Foundation Newsletter)

Kissing a girl who has smoked a cigarette is like licking an ashtray!! Governments contribute millions of rands and dollars to support tobacco farmers all over the world with crop subsidies. Then after spending all the tax payers' money to prove that smoking causes cancer and heart disease he spends hundreds of millions of rands and dollars to support the treatment of the cancer which it contributed to the cause of in the first place. Would

it also be willing to spend additional funds fighting the sale of the product which it encourages with subsidies? (You might want to re-read this paragraph!!)

To add insult to injury the World Health Organisation reported in March last year that for many years the steepest rise in cigarette smoking has been in all parts of the developing world where the number of cigarettes smoked has outstripped population growth! In the case of Africa the increase in cigarette consumption was almost twice as great, jumping by 41,5% against a population growth of 23,4%.