WHAT IS STRESS?

'Stress is a threat to the quality of life, and to physical and psychological well-being'.

There is growing evidence that stress is an important factor in the development of many of the diseases and conditions which take a high toll in developed Western countries. Among the conditions which seem in some way to be stress-related are high blood pressure, coronary heart disease, asthma, migraine, diabetes, ulcers, insomnia, and a range of psychological disorders from persistent irritability to severe anxiety and depression.

With this being the case, then the effective management of stress is clearly a desirable goal to pursue, but before we can begin to think constructively about managing stress, we need to clarify exactly what we mean by stress. When we talk about stress and stressful situations in everyday conversation, we use the terms loosely to refer to a wide variety of phenomena, and if we were forced to come up with a precise definition, we would probably all produce something rather different. This diversity of opinion is also to be found in the large body of literature on the subject.

Below are two of the most accepted models, which embrace most of the characteristics of stress and its various consequences.

The transactional model

According to this model, stress is defined as the result of an imbalance between a perceived demand on the one hand, and a person's perception of his or her ability to meet that demand on the other. The crucial balance is not between actual demand and actual capability, but between perceived demand and perceived capability. Take as an example two people about to give a lecture. Objectively measured, their past performances have been very much on a par. Person A is self-confident, outgoing and thinks of herself as a good lecturer, so the prospect of performing in this way causes no great stress. Person B is shy and lacking in self-esteem, and thinks of himself as an awful lecturer, in spite of reassurance from his friends. The prospect of giving a lecture makes him feel ill for days beforehand. This illustrates that it is not the situation in itself (i.e., being about to give a lecture) which causes stress, but the individual's own perception of his or her ability to cope.

This model provides a useful framework for looking at stress as it emphasises the individual nature of the experience of stress and gives us some insight into how we could manage our stress more effectively, i.e., through changes in our thoughts and attitude.

The engineering model

This model borrows its terms from Hooke's Law of Elasticity, a law of physical science which describes how loads produce deformation in metals. The load or demand, placed on the metal is described as ‘stress’ and the resulting deformation is termed ‘strain. Hooke's law states that if the strain produced by a given stress falls within the ‘elastic limit’ of the material, when the stress is removed, the material will return to its original condition. If the strain forces the material beyond its ‘elastic limit’, some permanent damage will result.

When this principle is applied to people, it suggests that stress in the form of external demands can be tolerated up to a point, but that when it reaches a certain level, permanent damage may result. It also suggests that just as different materials have different elastic limits, so individuals vary in their ability to resist the damaging effects of stress.

When stress is defined in this way, the question then arises of identifying the conditions likely to cause strain. The problem here is that we all respond differently to a given situation or stimulus. For you, the thought of giving a lecture, playing a violin concerto, or climbing the north face of the Eiger might be a stimulating challenge while the idea of doing any of these things might reduce me to a state of complete panic. My playing Radio 1 at full blast all day may give me pleasure, but it might be considered a stressful stimulus by my neighbours.

Despite the difficulty of generalisation, much research has concentrated on trying to identify the common characteristics of conditions, which will be universally experienced as stressful.

These include:

Extremes of sensory stimulation - noise, heat, cold, humidity, over-crowding.

Disrupted physiological function (possibly as a result of disease, drugs, sleep loss, etc.).

Sensory deprivation - isolation, confinement, underwork.

Group pressure.

Perceived threat to cherished values and goals.

Lack of control over events.

Both these models illustrate that the experience of stress is an individual phenomenon, although there are certain types of stimuli, which may generally be experienced as stressful by most people. Situations in themselves cannot be categorically labelled stressful or unstressful. Stress is not something 'out there' by which we are bombarded. The experience of stress results from our relationship with our environment.

Managing stress - a framework for action

1. Changing the actual situation

This involves dealing with the agents of stress in the environment, by one of four possible strategies: adding, subtracting, reorganising or avoiding. Environmental changes may be simple and within the control of individuals, such as improving the lighting, seating or heating in an office, (although even these might not be straightforward for people who work in large bureaucratic organisations).

Examples of stress-reducing changes to the physical environment might include adding an extra light source, removing noisy machinery, reorganising desks to make better use of space, providing ergonomically designed seating and glare reducing shields for VDU screens, etc.

Some situations cannot be tackled in this way, and avoidance or departure may be the only way of dealing with the intolerable pressures of an unsatisfactory or unsuitable job, poor relationship, overcrowding, poor housing etc. The same strategies can apply to people; we may need to take stock of current relationships with family, friends and colleagues and in doing so decide that we need to add something to these relationships or subtract something, maybe reorganise our affairs or indeed avoid/leave a specific set of circumstances behind, because there is no other alternative.

Extreme forms of coping behaviour, like moving house to escape from noisy neighbours or leaving an unsatisfactory marriage or relationship, can often lead to new problems. The individual has to decide whether on balance it is worth substituting one set of problems for another, or whether other coping strategies might be more effective.

2. Improving one's ability to cope with the situation

This can involve developing specific skills to cope with a given situation or demand, for example, further training in dealing with the complexities of one's chosen profession, or additional supervision or support in the execution of one's tasks and duties. It also covers acquiring more general life-skills such as relaxation, assertiveness, time-management, objective-setting and communication, which can all help to reduce stress in personal life as well as in the context of employment.

3. Changing one's perception of the situation

This involves changing the way we think about a situation. We can change our thoughts about the nature of the demands being made of us, e.g., 'perhaps it is not so dreadful after all', or 'I have done more difficult things in the past, and I have survived'. I can also reduce stress by facing the worst-case scenario – 'What is the worst thing likely to happen if I fail? ... is it really that bad?' This kind of self-talk can help us see a particular situation in perspective, and offers us clarity, calmness and reassurance that in turn reduces our stress.

Self-talk, or the endless monologue which we carry on inside our heads, has a great influence on the way we perceive things. Significant shifts of perspective can be achieved by:

Changing from negative to positive self-talk. Instead of saying 'I must not make mistakes or fail', say 'I have a right to make mistakes and learn from them'.

Avoid 'catastrophising' or exaggerating the significance of problems, by using words like terrible, awful, disastrous, etc., when what we really mean is inconvenient, annoying, or a nuisance.

Avoid ‘demand’ words, whether applied to ourselves or other people. These include ‘must’, ‘should’ and ‘have to’. When you hear yourself saying (or thinking) ‘I must ...’ or ‘you ought to’ etc., try changing to ‘I would rather’ or ‘I would prefer’… and notice the difference.

Resisting the temptation to label things simply in terms of good and bad. Judging, criticising and moralising tend to generate resentment, frustration and self-righteous anger - all emotions which create stress.

4. Changing one’s behaviour

This involves taking action to 'stress-proof' ourselves by making adjustments in the way we live. Examples of positive lifestyle factors include:

A good nutritious diet.

Avoiding or reducing harmful substances, like tobacco, alcohol and other drugs.

Taking enjoyable exercise.

Having sufficient rest.

Pursuing creative hobbies and interests.

Learning and practising relaxation techniques to help unwind, and reduce physical, emotional and mental tension.

Summary

1. Stress is an unavoidable fact of life and can have harmful consequences if not managed effectively.

2.Although there are certain types of stimuli which are, as a rule, acknowledged as stressful, the experience of stress is also linked with individual perception of an imbalance between demands and ability to cope.

3. We often increase the pressure on ourselves by inappropriate attitude, expectations and behaviour.

4.We are most likely to experience stress in situations which combine a high degree of pressure with a low degree of control.

5. If the warning signs of stress are not recognised and effective coping behaviour not adopted, mental and/or physical ill-health and ultimately breakdown may result.

6. An effective stress-management programme may include changes in actual demand; improving ability to cope with situations; cognitive (thoughts) and behavioural change.

What happens to the body under stress?

Messages are sent to the brain that the body needs a sudden burst of energy to cope with danger. Immediately the body reacts by increasing activity in organs which are essential for energy and movement and slowing down activity in the organs which are not required in the immediate emergency. There are also secondary hormonal changes which take place when we are under stress, and this secondary response varies with our emotional response. So, dependent upon our perception of a situation, the type and quantity of chemicals (hormones) are released by the brain. The hormone cocktail will vary according to the nature, duration, and severity of the stressful situation.

For example, increasing anger leads to a corresponding rise in the production of the hormone nor-adrenaline. Other hormones that may be activated by our emotional state include adrenaline, dopamine, enkephalins, beta endorphin, cortisone etc. Every hormonal change is geared to providing increased energy, so that the body can cope with the extra demands being placed on it. However, these same hormones, once mobilised by our system, if they are not used, will go on to negatively affect our physical, intellectual and emotional well-being, causing for example, palpitations and chest pains, recurrent headaches, heartburn, insomnia, loss of concentration, mood swings and fatigue, just to name a few.

Other changes that occur include:

Circulation increases allowing a greater blood and oxygen supply to the brain, muscles and limbs.

Heart beats quicker and harder. Blood pressure rises as peripheral blood vessels constrict. Blood supply to skin is restricted.

Coronary arteries dilate to increase blood supply to heart.

Lungs take in more oxygen and release more carbon dioxide to enable increased tissue respiration during vigorous exercise.

More sweat is produced to speed up heat loss.

Skeletal muscles tense in preparation for physical activity - blood supply increases.

Liver releases extra sugar to provide energy during activity - as well as cholesterol and fatty acids.

Blood clotting ability increases to protect against excess blood loss if injury occurs.

Pupils dilate and eyelids are drawn back, giving expression of alertness and excitement.

Adrenal glands continue to produce adrenaline, nor-adrenaline and cortisones to prolong the 'fight/flight ' response. All these tendencies are increases in the body's activity as it prepares to respond to stress. On the next page are the activities which are decreased.

Decreased activity occurs as follows:

Digestion slows down or stops because the stomach and small intestine reduce their activity.

Kidneys, large intestine and bladder functions slow down as they are not needed.

Sphincter muscles close to prevent urination and defecation. (However, in moments of extreme danger the sphincter muscles may open).

Immune responses can decrease.

Blood vessels in salivary glands constrict making mouth go dry.

Summary

1. When our body is showing signs of stress and tension, it is important to see them as early warning signs and take an opportunity to rest and recuperate, even if only for a short time.

2. The fight/flight response is an essential and healthy reaction to danger but if a high level of arousal continues over a prolonged period, health problems are likely to occur, such as:

High blood pressure

Increased risk of heart disease

Habitual over-breathing (hyperventilation), faintness and dizziness

Digestive disorders such as duodenal and stomach ulcers

Skin problems such as rashes and allergies

Chest pains

Aches and pains in muscles

Headaches, migraines

3. When danger is perceived, the brain automatically sends messages to the body to prepare for action. However, by taking conscious control of our limbs, muscles and breathing organs, through activities such as breath therapy, positive affirmations, creative visualisation or relaxation, we can send messages to the brain that alter our response to a 'perceived' stressful situation, this is a very effective way of controlling the feelings and physical reactions associated with stress. Remember we do have a choice in our response to stress so make the choice that is right for you!