

A Road from Stress to Stress-free Life

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“Stress is not what happens to us. It’s our response to what happens. And response is something we can choose”

--- By Maureen Killoran

Only a healthy bud can blossom. In the same way, only a healthy being can succeed. So what’s being healthy? If you are feeling stressed and jagged inside, then you are not healthy. If your mind is stiff and not calm, you are not mentally healthy. When the emotions are jagged, you are emotionally not healthy. To attain a perfect state of health, one has to remain mentally calm, emotionally soft or in other word stress free mind.

How do we bring good health to our system? First of all, find out for yourself whether you are healthy. Health is (having) a disease-free body, a stress-free mind, an inhibition-free intellect, that includes all and soul that is free from sorrow.

Stress is the main cause for many diseases. Stress-free life is synonymous to healthy life.

What is Stress?

The word ‘stress’ is defined by the Oxford Dictionary as “a state of affair involving demand on physical or mental energy”. A condition or circumstance (not always adverse), which can disturb the normal physiological and

psychological functioning of an individual.

For thousands of years, people believed that stress made you sick. Until the nineteenth century, the idea that the passions and emotions were intimately linked to disease was dominant, and people were told by their doctors to go to spas or seaside resorts when they were ill. Gradually these ideas lost favor as more concrete causes and cures were found for illness after illness. But in the last decades, many scientists have rediscovered the links between the brain and the immune system which influences the emotions.

Relation between Immune system and the Brain

When you have an infection or something else that causes inflammation such as burn or injury, many different kinds of cells from the immune system stream to the site as soldiers moving into battle, each kind with its own specialized function. Some are like garbage collectors, ingesting invaders. Some make antibodies, the “bullets” to fight the infectious agents; others kill invaders directly. All these types of immune cells must coordinate their actions, and the way they do that is by

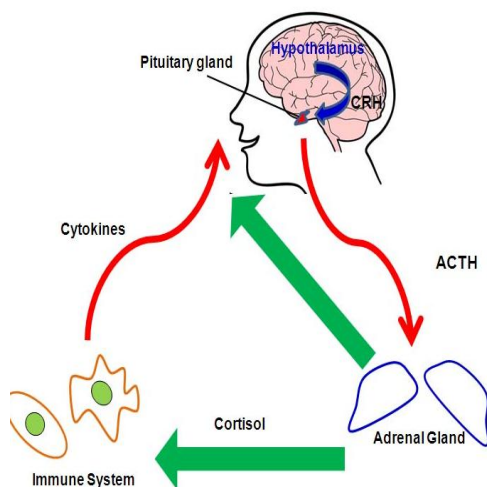
sending each other signals in the form of molecules that they make in factories inside the cell.

These molecules have many more effects than just being the walkie-talkie communication between different kinds of immune cells. They can also go through the bloodstream to signal the brain. These immune molecules cause the brain to change its function. They can induce a whole set of behaviors that we call sickness behavior. We lose the desire or the ability to move, we lose our appetite, lost interest in sex, etc.

These behaviors might help us conserve energy when we are sick, so we can better use our energy to fight disease.

These signaling molecules from the immune system can also activate the part of the brain that controls the stress response, the hypothalamus. Through the cascade of hormones released from the pituitary and adrenal glands, the hypothalamus causes blood levels of the hormone cortisol to rise. Cortisol is the major steroid hormone produced by our bodies to help us get through stressful situations. The related compound known as cortisone is widely used as an anti-inflammatory drug in creams to treat rashes and in nasal sprays to treat sinusitis and asthma.

Fig1: A communication cycle from Immune system to the Brain and back to the Immune system



Stress and the Immune System

If you are chronically stressed, the part of the brain that controls the stress response is going to be constantly pumping out lots of stress hormones. The immune cells are being bathed in molecules which are essentially telling them to stop fighting. And so in situation of chronic stress, your immune cells are less able to respond to an invader like a bacteria or a virus.

People in these situations, such as in caregivers like those taking care of Alzheimer's patient, students undergoing exam stress, Army Rangers undergoing extremely grueling physical stress, and couples with marital stress, show a prolonged healing time, a decreased ability of their immune systems to respond to vaccination, and an increase susceptibility to viral infections like the common cold.

Control the immune system

If your brain can't make enough of these hormones to turn the immune system off when it doesn't have to be active anymore, then it could go on unchecked and result in autoimmune diseases like rheumatoid arthritis, lupus, scleroderma, multiple sclerosis etc., which mainly produce inflammatory response.

So if you have too much stress hormone shutting down the immune response, you can't fight off the infection and you are more susceptible to infection.

If there is too little stress hormones and the immune response goes on unchecked,

then you could get an inflammatory disease.

The dynamics of stress

In a challenging situation the brain prepares the body for defensive action – the fight or flight response by releasing stress hormones, namely, cortisone and adrenaline. These hormones raise the blood pressure and the body prepares to react to the situation. With a concrete defensive action (fight response) the stress hormones in the blood get used up entailing reduced stress effects and symptoms of anxiety.

When we fail to counter situation (flight response) the hormones and chemicals remain unreleased in the blood stream for a long period of time. It results in stress related physical symptoms such as tense muscles, unfocused anxiety, dizziness and rapid heartbeats. We all encounter stressors (causes of stress) in everyday life, which can accumulate, if not released. This state of accumulated stress can increase the risk of both acute and chronic psychosomatic illness and weaken the immune system.

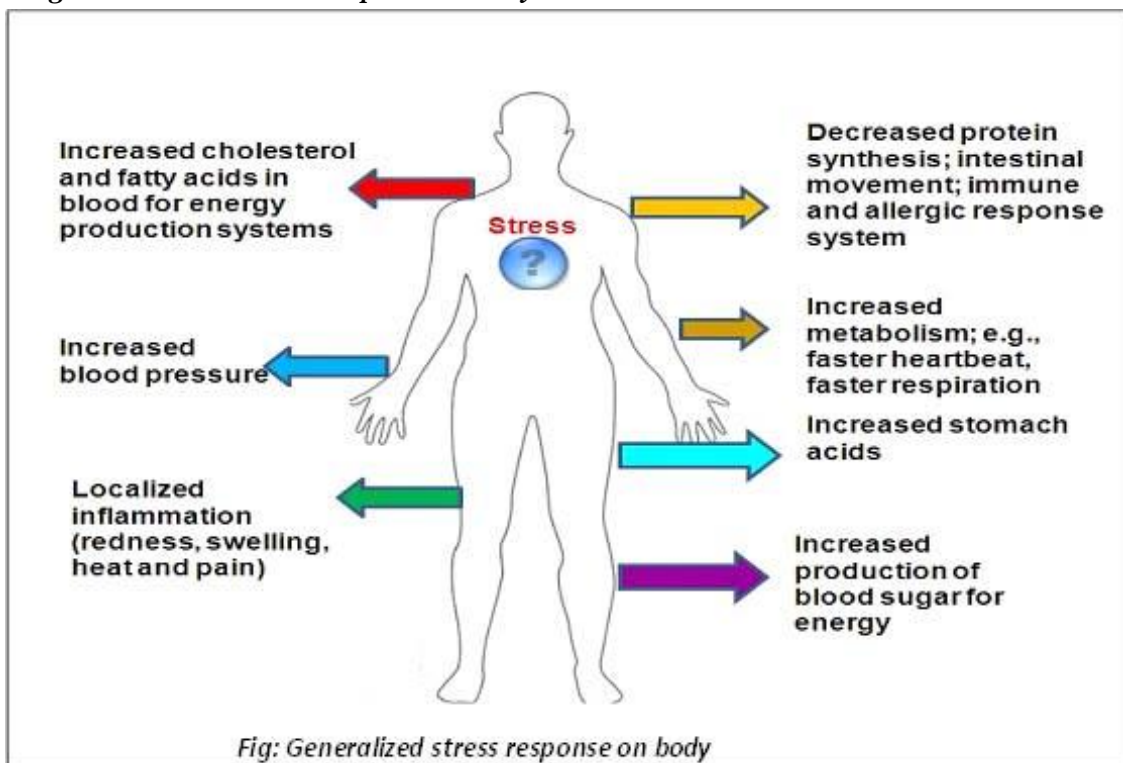
Causes of Stress in everyday life

Listing the causes of stress is tricky. There can be innumerable stress factors since different individual react different to the same stress conditions. Extreme stress situation for an individual may prove to be mild for another and might not be as stress symptoms for yet another person. For that matter, causes such as a simple flight delay to managing teenage child at home can put you under stress.

- **Life's situation**

Major events such as divorce, midlife crisis, death, financial worries, persistent strain of caring a sick person, nagging health problems or managing a mentally or physically challenged family member can act as potential stressors. Even conditions such as prolonged unemployment, sudden lay-off from job can leave you under tremendous stress. Moreover one has to live through these

Fig2: Generalized stress response on body



situations, in the right spirit, to make living a worthwhile experience.

Though anger, fear and other negative emotional reactions are natural and necessary, we need to channel them constructively to create a balance state in our body and mind.

- ***Our attitude***

It is that life acts and you react. Our attitude is our reaction to what life hands out to us. Stress is created by what we think rather than by what has actually happened. For instance, handling adopted children, adolescents, academic failures, retirements, tax auditor, sudden loss of money needs a relaxed attitude, focused determination and preparedness to face the quirks of life positively. Otherwise one tends to feel stressed and reacts in anger and frustration.

Again in case of marital conflicts, rather than adopting an accusing and frustrating attitude such as “you made my life hell” or “you are not meeting my emotional needs” we should accept that “yes, we have a problem”, helps clear the clouds. Failure in adopting a realistic attitude to events creates symptoms of depression and aggravates stress situation.

Attitude is more important than fact. It is more important than the past, than the education, than money, than circumstances, than failures, than success, than what other people think or say or do. We should be convinced that life is 10% what happens to us and 90% how we react to it.

A right attitude can make a resilient person out of us in the face of stressful situations.

- ***In our genes***

It is identified that specific genes govern three endorphin groups, which constitute our stress hormones. Hence, our reactions to physical and emotional stress could also be “genetic”.

Children of stressed-out parents are more likely to be ill equipped to handle stressors positively. They may suffer from emotional disturbances, depression, aggressive behavior or confusion besides chances of weak physical constitutions, which again can be a source of anxiety.

- ***Workplace stress***

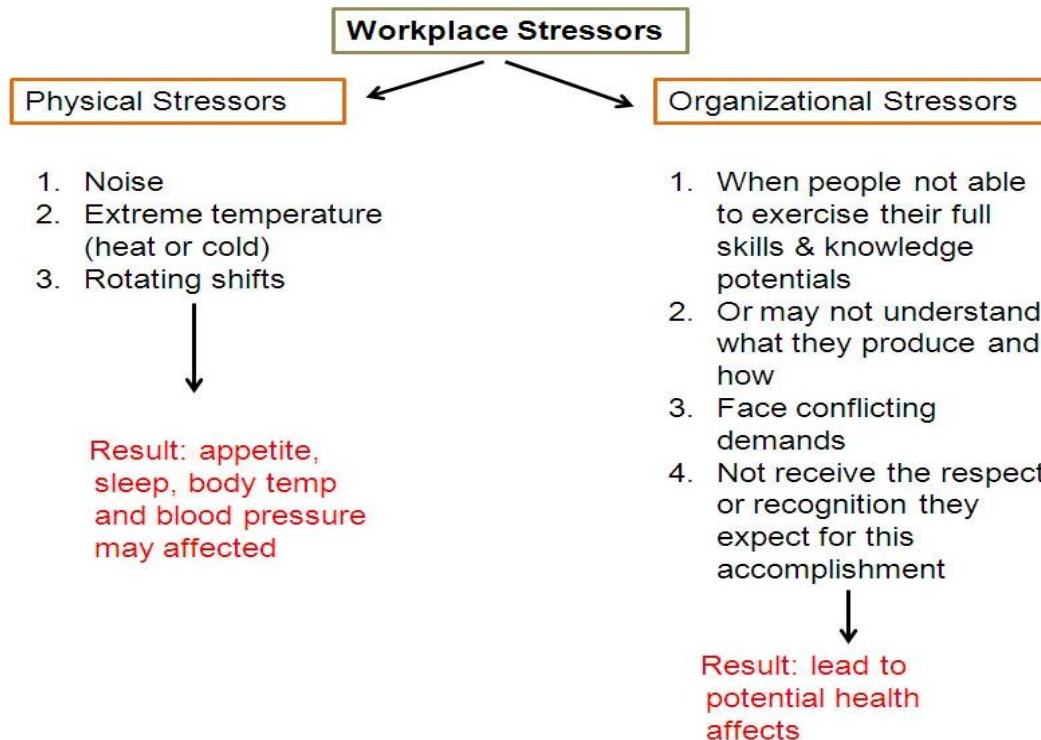
Organizational stressors result when people face anxiety or frustration from aspects of their work that they cannot control.

1. *Work overload or underload-*

Some main causes of organizational stress are as follows:

A person may become frustrated at work due to a number of circumstances,

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such as repetitive tasks without the opportunity for variation or for undertaking greater responsibility and learning, and not receiving adequate recognition. Excessive work without appropriate breaks may also be distressful.

2. Role uncertainty and role conflict

The responsibilities placed on individuals are often positive aspects of their work. Meeting responsibility and “doing a good job” are important factors in self-esteem. But where job responsibilities are unclear, work can be confusing and frustrating and may lead to excessive stress.

3. Job satisfaction

Lack of job satisfaction may contribute to excessive stress. The lack of promotional opportunities or restrictive

job functions and uncertainty about job performance may be the contributing factors.

4. Job security

A concern for job security may contribute to stress. A feeling of insecurity can come from several sources. The potential for layoffs due to lack of work, job loss due to discriminatory dismissal and sexual or racial discrimination or harassment are examples of stressful situations.

Organizational stressors can be eliminated through changes in working conditions, such as job rotation and opportunities so as to allow people to learn and apply new skills. Employee involvement in the decision-making process, clear work assignments to avoid work uncertainty, and policies that eliminate harassment and discrimination

in the workplace can help to reduce excessive stress.

Student life and stress

Student-life coincides with adolescences, and stress can manifest in children as a reaction to the changes in life in addition to academic pressures. Children often lack in academic motivation and performance, as their attention is divided among a lot many things, especially creating an identity for themselves.

Some main cause includes parental pressure to perform and to stand out among other children. When they can't rise up to that expectation, children may suffer from frustration, physical stress, aggression, undesirable complexes, and depression.

Over scheduling a student's life can put them under stress. Parents may want him/her to learn music, painting, or be unmindful (often) of the children's choice and capabilities that it puts a lot of mental pressure on them in an effort to fulfill their parents' wishes.

School systems cram students with a tremendous amount of homework, which they usually have to complete spending their evenings, weekends and most of the vacations. Unable to find enough time of their own, students often lose interest in studies and under perform.

Important points for parents and children

- *The first step for parents is to be aware of possible stressors and to recognize signs of stress.*
- *Talk with your child. Find out what's happening in life. Be*

honest and open with him. He should talk about his problems. Teach him/her to transfer coping strategies to other situations.

- *Don't burden them with your problems. But, tell children about the family's goals and discuss difficulties in a friendly manner.*
- *Provide opportunities for them to learn stress management techniques.*
- *Compliment children when they do well, and don't forget hugs and kisses.*
- *Use humor to buffer bad feelings and situations. A child who learns to use humor himself will be better able to keep things in perspective.*
- *Set a good example. Demonstrate self-control and coping skills. He can benefit by seeing how to cope successfully with stress.*
- *Physical exercise and sports are good stress reducers, provided there is not a debilitating level of competition, or pressure to perform or fear of failure.*
- *Spend time together or having a few laughs together goes a long way in reducing stress and in building solid family relationships.*

Stress and your physical health

Stress and health are closely related. It is well known that stress, either quick or constant, can induce risky body-mind disorders. Keep in mind that chronic stress can be associated with mental conditions like anxiety, tension, depression, nervousness, sleeplessness disorders as well as

physical problems like muscle cramp, dizzy spells, changes in appetite, frequent headaches, gastrointestinal problems and prolonged feelings of worthlessness. These all can result in chronic health problems, some of them are as under:

Cardiovascular Disorders

Stress does contribute to high blood pressure, high cholesterol, and other cardiac risk factors such as addictions and obesity. Frequent stress responses of our body increase a host of molecules potentially dangerous for the optimal health of heart. There are low-density lipoproteins (LDL, the “bad” form of cholesterol) and other lipids types such as triglycerides. Because stress delays the processing and clearance of these fats, their accumulation puts people at risk of developing atherosclerosis and other heart disease.

As a response of daily stress, extreme reactors show a high level of palpitation and blood pressure in their body; these may gradually result in injury to the coronary arteries and the heart.

It is evident that people who live in chronically stressed-out conditions are more likely to take up smoking, alcohol and drugs, fall into eating disorders (unhealthy food habits) and feel lethargic. Doctors say all of these stress-related behaviors have a direct effect on the development of coronary artery disease.

Gastrointestinal Disorders

In severe stressed condition, blood supply to the stomach is restricted, which slows down normal digestive functions. Also the function of the entire intestine is controlled partly by the nervous system, which in turn is directly affected by stress. These conditions, including one’s diet during stress can offset gastrointestinal disorders such as an ulcer or irritable bowel syndrome (IBS).

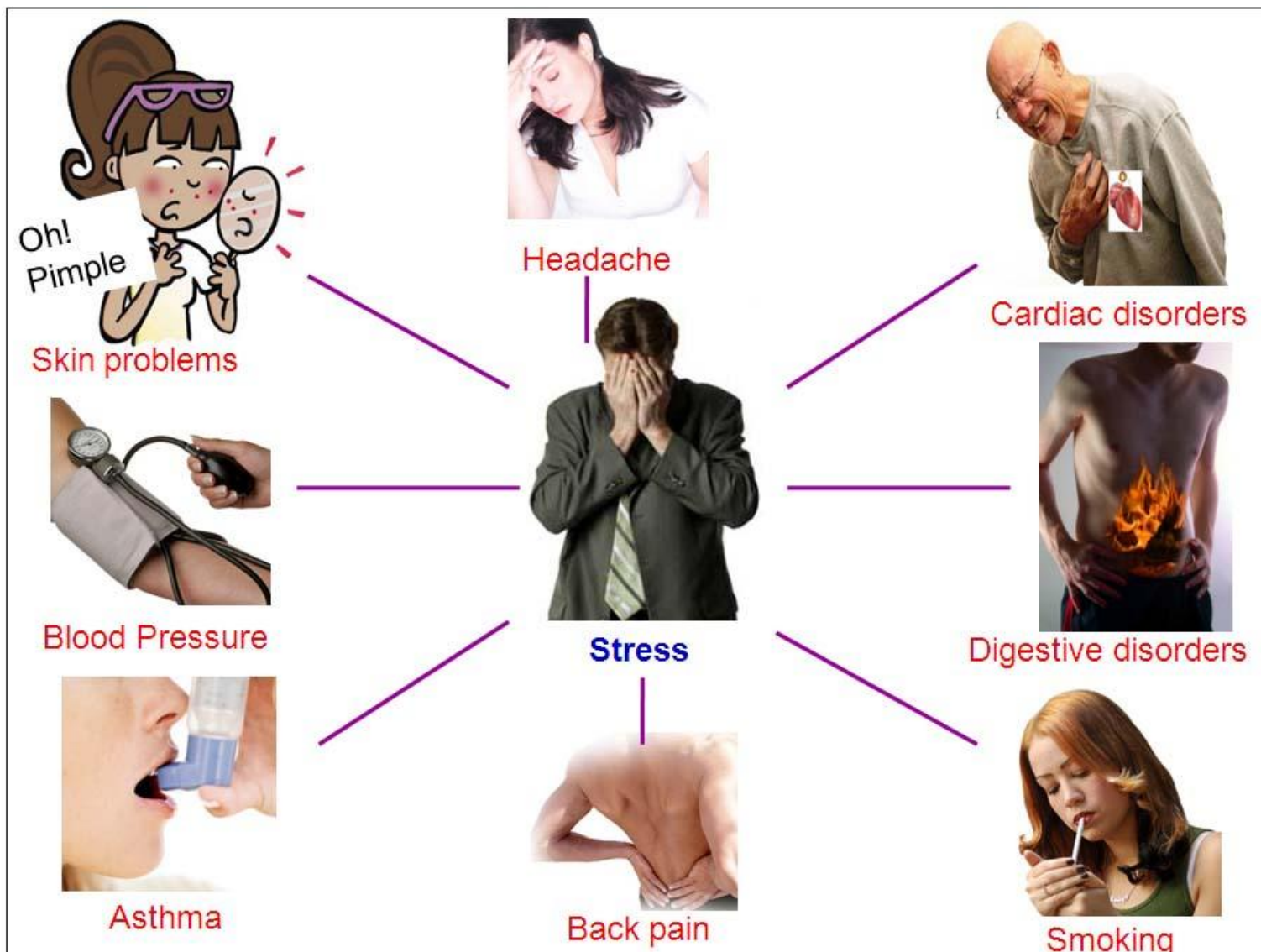
Stress can make these symptoms worse if somebody is already suffering from gastrointestinal diseases.

Cancer and Neuro-Degenerative Disorders

A research conducted in 1990 showed stress induced in reduction of T-Lymphocytes (white blood cells) that destroy cancer cells. In other words, stressors cause lowest level of natural-killer-cell (another immune cell) activity in the body.

Chronic stress induced homeostasis changes and immune reduction, which in turn affect the balance between oxidants and antioxidants in the body. Alternation in this balance in favor of oxidants may result in pathological responses causing functional disorders and disease such as cancer and Alzheimer’s disease.

Fig3: Stress and its effect on health



Asthma

In asthma patients, a stressful situation can make the airways over-reactive and precipitate an attack.

Skin related problems

Sometimes you say, “My kids are giving me gray hair! And I’m crushed. And sometimes you complain, “I always get a pimple on

my cheeks before a party or before a big date!’ It is not a coincidence, when you are stressed-out, your body releases a hormone called cortisol. When cortisol levels increase, oil production increase and sometimes that will cause acne in individuals who never even had acne before. Only acne is not bad enough, stress can cause your hair to fall out too. Men and women can develop alopecia-bald spots of hair in the

beard and scalp-when they are under stress.

As we read earlier in this chapter that chronic stress induced homeostasis changes and immune reduction which tends to affect the balance between oxidants and antioxidants in the body. The alternation in this balance in favor of oxidants can also accelerate the aging process.

Immune related Disorders

Stress is known to worsen many immune related medical conditions.

Cortisole produce during stress situations may suppress the body's immune response, increasing susceptibility to infectious disease.

Frequent or chronic stress conditions increase the chances of bacterial infections such as tuberculosis and group-A streptococcal disease.

Some stress is good

People tend to talk about stress as if it's all bad. It's not. Some stress is good for you. For instance, men is going to give a talk, he has to get his stress response to a certain optimal level so he can perform in front of audience when he give a talk. Otherwise, he may come across as lethargic and listless.

Some 'stress' situation can actually boost our inner potential and can be creatively helpful.

Experts say that stress, in moderate doses, are necessary in our life. Stress responses are one of our body's best defense systems against outer and inner dangers. In a risky situation, body release stress hormones that instantly make us more

alert and our senses become more focused. The body is also prepared to act with increased strength and speed in a pressured situation. Under stress, the brain is emotionally and biochemically stimulated to sharpen its performance.

Very often, at various crossroad of life, stress may remind you of the transitory nature of your experiences, and may push you to look for the true happiness of life.

But, while some stress is good, too much is not good. If you are too much stressed, your performance falls off.

The objective should not be to get rid of stress completely because you can't get rid of stress- stress is life, life is stress. Rather, you need to be able to use your stress response optimally.

Stress managing tips

Stress management is the need of the hour. However we try to go beyond a stress situation, life seems to find new ways of stressing us out and outbreaking us with anxiety attacks.

There are some easy, practical things humans can do to reduce the amount of stress in their lives:

- 1. Be realistic and don't try to be perfect, or expect to others to be so.*
- 2. Don't over schedule; cut out an activity or two when you start to feel overwhelmed.*
- 3. Try to learn to control your stress to make it work for you. Don't just think of getting rid of your stress; think of turning it to your advantage.*
- 4. Get a good night sleep.*

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5. *Get regular exercise- just not excessive or compulsive exercise- and follow a healthy diet.*
6. *Learn to relax by building time into your schedule for reading or a nice long bath, or listening soothing music.*
7. *Being able to laugh stress is the smartest way to ward off its effects. Laughter lowers blood pressure and reduces hypertension. Laughter reduces stress hormones and triggers the release of endorphins- body's natural killer. It produces a general sense of well-being.*

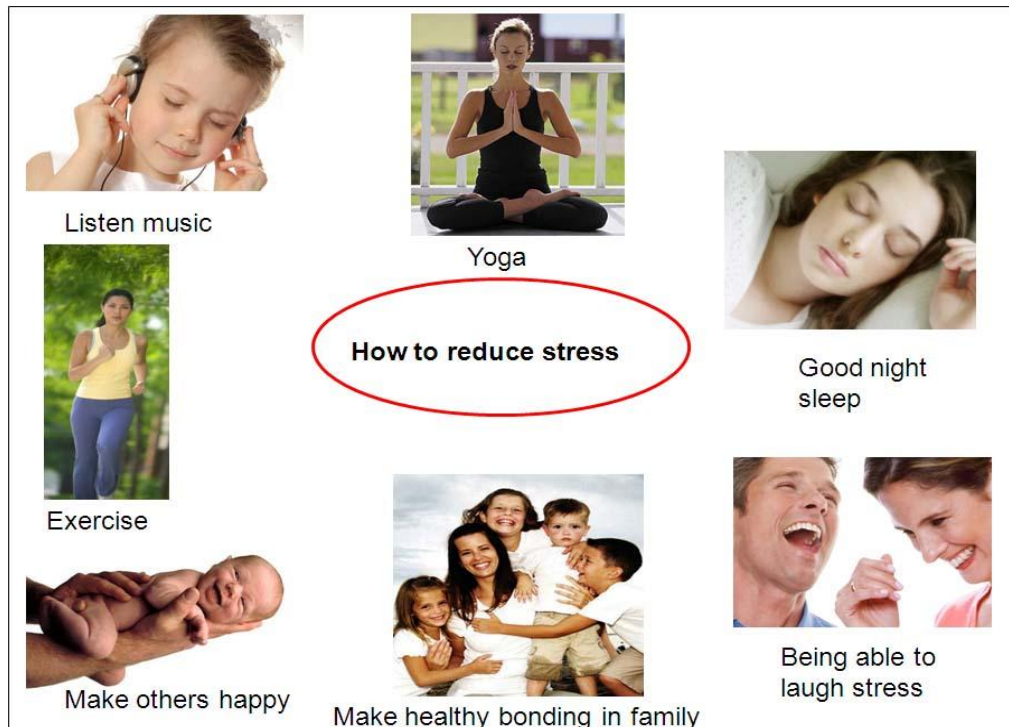


Fig4: Stress reducing techniques

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