

## STRESS and its EFFECTS

Stress is as much a part of life as eating or sleeping. Stress is the body's response to a physical and mental demands called stressors. Physical stressors might be hunger, thirst, cold, or feeling tired. Certain drugs, such as tobacco or caffeine, cause physical stress, too. Mental or emotional stressors can trigger the same responses in the body that physical stressors do. such stressors include worry about work, school and problems in relationship. Worry about money or poor health are other causes. Even happy events may be stressful.

The body's response to stress is the same whether the stressor is physical or mental. Stress usually occurs in three stages.

As soon as you recognize a stressor, your body reacts. This quick physical warning is the alarm stage. When you feel fear, your body releases adrenaline. Adrenaline is a hormone that causes a rush of energy in time of danger. Your heart rate and breathing speed up. Blood rushes from your stomach and other internal organs to your arms, legs, and brain. The adrenaline has prepared you to fight with your greatest energy or to flee at your top speed. The body's immediate response to stress is called the fight or flight response.

The second stage of stress starts when your body fights or flees. When your body works against the stress, it is at the resistance stage. In this stage, people overcome stress with defense mechanisms. These are sometimes called coping mechanism. Coping means acting to correct a problem. some mental coping behaviors are humor and denial. Using a coping mechanism may help you control certain symptoms of stress. For example, you may be able to face a bad situation by joking instead of losing your temper. But you might not be able to stop your nervous perspiration. Few people can consciously stop the physical symptoms of stress.

If stress lasts too long, you may move into the exhaustion stage. The body's defenses against stress are used up. You are unable to fight, flee, or resist a threat in any way. Your body and mind are so tired you can no longer resist the stressor. During this stage people often become ill.

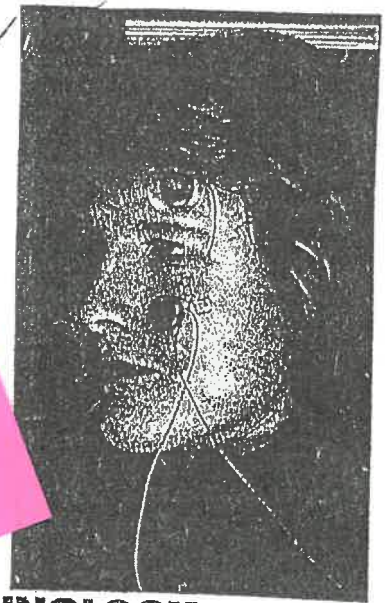
Stress can weaken the body and increase the risk of disease. Stress for long periods weakens the body's disease-fighting system. Some physical disorders that result from stress are psychosomatic. A psychosomatic illness is a physical disorder caused by stress rather than disease or damage to the body. A psychosomatic illness is simply a physical response to stress. People may react in different ways. Sleep disorders are a common example. Worrying about something may make it hard to sleep. In some people, stress may result in sleeping much longer than usual. The skin can be bothered. Digestive problems also may be psychosomatic. The immediate response to stress includes slowing down the digestive process. Nausea, vomiting, diarrhea, and constipation are also common results of stress. Another example is an ulcer - a hole or sore in the lining of the stomach or other parts of the digestive system. Stress may worsen this condition. Various types of headaches, too, can be physical symptoms of stress. The heart and blood vessels suffer most from high levels of stress. High blood pressure is often associated with stress.

Stress, especially mental stress, can accumulate. Scientists have developed various scales to judge the level and effect of certain stressors.

While too much stress may cause illness, too little stress makes life dull. <sup>^ mostly, 20-50% daily</sup> Nobody would want every day to be exactly the same with no risks. Stress can have both positive and negative results. When stress has a negative effect, it is called distress. People may feel distress when they are in new social situations. They may want to impress a special person at a party or to do especially well as they present a class project. Most people in stressful situations have similar physical reactions. Their hearts beat faster. They may feel a <sup>^</sup> lump in the throat. Their hands may feel clammy, or their mouths may go dry. <sub>muscle</sub>

Stress may also have positive effects. Stress that has a positive effect is called eustress. An example might be learning a new sport. The activity is very positive. But most people will feel some stress because it is new. Even happy events can cause stress. It is important that people learn to increase their eustress and decrease their distress. Setting a comfortable level of stress and forming healthy habits for reducing stress can help.

2 kinds of stress  
effect of  
negative  
positive



## TECHNOLOGY

**BIOFEEDBACK THERAPY**—When you are under stress, many parts of your body are affected. Such functions as heart rate, breathing, balance, and eye coordination are all influenced by stress. Most of these functions are controlled automatically by the central nervous system—you do not consciously cause the changes. But today biofeedback therapy is allowing people to bridge the gap between the body and conscious awareness. During biofeedback therapy, special electronic equipment is attached by wires to different parts of the body. For example, an electromyograph is a machine that monitors the activity of muscles. The patient is able to know what is happening inside the body by observing changes in colored lights or listening to different sounds. With biofeedback, the patient learns how to control the body's responses. For example, a patient may learn to relax the muscles that tighten and cause a headache. Biofeedback therapy has been used to lower high blood pressure and to control asthma. Thus biofeedback can help patients learn ways to counteract the effects of stress. With practice, the patient may learn to control the body systems without the need for the electronic equipment.