

Stress and Aging

by Kathy Birkner, C.R.N.A., Ph.D.
Diplomate, American Academy of Pain Management

The aging process begins the day you are born, and so do the effects of stress. Stress is subjective and has a personal effect. What is stressful to one person may not be to another. People react differently to various situations, and any change can provoke stress. As we age, it is often more difficult to release stress.

An important key to stress and aging is how we handle stress. As a child we learned many coping skills from our parents, and often react as they did. Do you remember how they aged or how illness kept reoccurring in a cycle?

Stress can arise from a variety of sources including overwork, death of a loved one, lack of sleep, a change of residence, marriage or divorce. Simply, anything that taxes you mentally and physically. The stress can be positive or negative, and can cause aging even if the change is for the good. Stress can involve readjustments and anxieties.

Yet other sources of stress may be from negative thinking habits, a high strung or impulsive character, emotional drains, social pressures, conflicts, confusion, frustration and boredom. Even our environment can cause stress and add to aging. Some examples include chemical or radiation exposure, exposure to pesticides, drugs or tobacco. Even certain diseases, injuries and pain can be the catalyst for stress. The warning signal for danger comes when small stresses begin to combine, multiplying their effects.

Symptoms of Stress Result in Aging

Much research has been done on the physical effects of stress and aging. Stress slowly takes a toll on the body causing deterioration of the body through cell damage. This makes us grow older physically and mentally.

The First Level of Symptoms is very slight. The symptoms can be as mild as losing interest in doing enjoyable activities or as vague as a sagging corner of the eyes. Other signs might include short-temper, boredom, rolling of the hands, creases developing in the forehead. These are subtle signs the brain is dealing with more than it can effectively handle.

The Second Level of Symptoms is more noticeable. Important warning signs might include anger, insomnia, loss of interest, fears, and sadness. These are signs that you are not managing your life well. You need to do something before the symptoms progress to the third level and become harder to reverse.

The Third level of symptoms includes certain physical symptoms such as headaches, neckaches, backaches, high blood pressure, upset stomach, strange heartbeats, tic, and increased tendency to become ill. Stress is taking a serious effect on your body, and makes you look older. It is extremely important that we "listen" to our body. If we push forward, disease results.

The Fourth level of symptoms can result in actual disease. Cancer, heart disease, skin disorders, ulcers, asthma, stroke, hepatitis, allergies, kidney failure, susceptibility to infections, pain and mental breakdown are all known to be related to stress. This level of stress causes us to age.

Sometimes some diseases can be reversed by eliminating the stress and taking the needed nutrients and amino acids or getting therapy. Other factors can precipitate the condition and often the condition itself creates additional stress, aggravating the condition.

Our coping skills are utilized as early as age four or five. The way in which we do or do not manage stress is carried into our adult lives. Each person's ability to handle stressful or anxious situations depends on an extensive list of factors. These include family environment predispositions, child-parent relationships and a lifelong challenge on stress conditioning. Even our ability to cope can be influenced by a chronically negative person. Factors that cause cell damage are multiple, complex and chronic and these induce or enhance aging.

Disease is now coming to be seen as arising from causes within the person such as nutrient imbalances and the body's reaction to environmental changes. Every person has a distinct chemical composition, and every tissue in the body is affected by nutrition. When we are under more stress, we burn up more vitamins and minerals, but we especially burn the amino acids. Diet is important. But unless you consume 3,000 to 4,000 calories per day, you are probably vitamin, mineral and amino acid deficient.

People have begun to take direct responsibility for their health. Our interest in nutrition is symbolic of this health change attitude. The functions of amino acids are the most diverse of the nutrient groups. They contribute to the building of proteins, muscles and neurotransmitters which are the chemical language of the brain. Stress demands more amino acids because they are burned more rapidly.

Protein is needed for health and formation of muscles, hormones, membranes, glands, enzymes, skin, plasma, teeth, antibodies, ligaments, hair, bones, hemoglobin, brain and nerve cells. Signs of insufficient protein intake include: fatigue, poor digestion, bloating, slow growth, anemia, low vitality, sluggish pulse, scarring and slow healing, frequent infections, fragile bone, wrinkled skin, senility, weakness and abnormal blood pressure.

GABA (Gamma-aminobutyric Acid) is an amino acid complex which calms anxiety and stress reactions. The GABA receptors in the brain are the sites where drugs like Valium, Librium and Xanax act. GABA fills the receptor sites in the brain, thus preventing a bombardment of anxiety related messages from being sent to the motor centers of the brain. GABA seems to lower the excitatory levels of the cell that is about to receive the incoming message. If the anxiety, stress or fear is prolonged, GABA's ability to block the messages is decreased. Finally the process of rating the message priority breaks down, and the front part of the brain is literally bombarded with anxiety messages. Then a full blown panic attack follows.

GABA can actually mimic the tranquilizing effect of Valium and Librium without the heavy sedation. Pure GABA readily dissolves in water and is absorbed into the system within five to ten minutes. A word of warning, if some GABA stops the acute anxiety, more is not good. Too much GABA can cause increased anxiety, and can cause symptoms such as shortness of breath, numbness around the mouth and tingling extremities. At this point, eat some food if it occurs.

The "B" vitamins are very important with any kind of stress. Remember, stress is *anything* that causes extra tension, either emotional or physical. Vitamin B is actually a complex of several vitamins including B1-thiamine, B2-riboflavin, B3-niacin (niacinamide), B6-pyridoxine, B12, pantothenic acid, biotin, PABA (para-aminobenzoic acid), folic acid, choline and inositol. All of the "B" vitamins are water soluble, and are excreted via the kidneys. They are not stored in the body. The "B's" must be supplied in sufficient amounts at all times, and especially during stress.

Alcohol consumption increases the need for more "B" vitamins as the "B's" are required for the burning of alcohol in the body. Alcohol shares many similar properties with the hypnotic and anti-anxiety drugs. Alcohol has been shown to work as an MAO inhibitor. An MAO inhibitor is a category of antidepressants.

Alcohol sometimes provides courage in stressful situations since it works primarily on anticipatory anxiety. If you consume alcohol on a daily basis to combat stress, you could easily fall into alcoholism. Consumption of alcohol can leave the body totally depleted of all vitamins, minerals, and amino acids. A person who uses alcohol for

stress reduction has chronic anxiety. Aging results due to the toxic by-products of alcohol.

Try fighting depression with tyrosine or phenylalanine. Tyrosine is derived from phenylalanine in the liver, or it is available by itself. Dr. Alan Gelenberg of Harvard Medical School stated that a lack of tyrosine results in deficiency of the hormone norepinephrine at a specific brain location. This in turn relates to mood problems such as depression. Do not take phenylalanine or tyrosine if you are taking tricyclic or MAO inhibitor medications.

Phenylalanine -> Tyrosine -> Epinephrine (Adrenalin) -> Norepinephrine (Noradrenalin)
--

Many smokers have an underlying depression. Smokers tend to have a low level of norepinephrine. Tyrosine can elevate the level of norepinephrine. Smoking increases your risk of cancer and heart disease. According to Linus Pauling, one cigarette decreases your life expectancy by 15 minutes, and burns 25 milligrams of Vitamin C.

Other important inhibitory neurotransmitters include glycine and glutamine. Both of these amino acids tend to slow messages down in the brain helping you to cope. You are literally feeding your brain when you increase your intake of specific amino acids.

Glutamine was found to stop the craving for alcohol by Drs. Roger Williams and Lorene Rogers at the Clayton Foundation at the University of Texas. Combat stress and aging by feeding the brain the necessary nutrients.

The scavengers or antioxidants may offer hope for longevity. Free radicals cause changes in the structure of the cells when they replicate. These cell mutations cause us to age. The most common scavengers or antioxidants include Vitamin C (Ascorbic Acid / Ester C), Vitamin E, Beta Carotene, Cysteine (NAC), Glutathione, and Melatonin.

Vitamin C fights aging by preventing the build-up of "free radicals" in the body. According to Linus Pauling, Vitamin C helps to regulate cholesterol increasing the HDL (good cholesterol) and may play a role in heart disease. Vitamin C should be increased anytime there is increased stress or even physical flare-ups due to allergy or hayfever. Increasing your intake of Vitamin C may prevent you from contacting a cold or virus. Vitamin C is a natural antihistamine. The Ester C has a neutral pH of 7.0 and does not cause gastrointestinal upset that ascorbic acid causes. It acts as a timed release vitamin C even though it is not timed release.

Vitamin E prevents or reverses oxidation of the tissues in the body. It slows down the deterioration of the body. Dr. Evan Shute and his staff researched Vitamin E extensively. Vitamin E is helpful with a multitude of heart and vascular problems, burns, as well as providing

protection against cancer. Recommended dosage range is 200 to 2,000 milligrams per day.

Research is continuing on the benefits of melatonin. Melatonin is a neurohormone. It is important in our sleep wake cycle. Dr. Reiter at the University of Texas Health Science Center in San Antonio calls melatonin one of the best antioxidants known today. Usual dosage is one to three milligrams of pure melatonin usually one to two hours before bedtime.

Recent research indicates carnitine is vital to a meat-eating individual. Vegetarians tend to have higher levels of carnitine than non-vegetarians. Carnitine lowers the triglyceride and cholesterol levels. It seems to increase exercise tolerance, and prevents some irregular heartbeats. Usual dosage level of carnitine is 500 to 1,000 milligrams per day.

CoEnzyme Q10 is essential for the health of all human tissues and organs. Deficiencies of this substance have been reported in a wide range of conditions including heart disease, congestive heart failure, high blood pressure, periodontal (gum) disease, diabetes, cancer and immune disorders. CoQ10 is a vital nutrient in the creation of energy that the cells need for life. Without CoQ10 we are unable to resist infections and disease. As we age, the amount of CoQ10 decreases in the body making us more vulnerable to serious illness. CoQ10 supplementation can increase energy levels and by supplementing your diet with CoQ10, you may dramatically reverse the effects of aging and decreasing health. Suggested dose level is 10 to 100 milligrams per day for average person. People with heart disease or congestive heart failure may need to increase their levels to 200 milligrams per day.

Magnesium's importance is often overlooked, and most Americans do not get enough magnesium. Magnesium is the number one stress mineral. We deplete our levels of magnesium through sweating and exercise, high intake of sodas or other drinks which contain high levels of phosphate. Some symptoms of magnesium deficiency include anxiety, heart palpitations, muscle spasms, eye or muscle twitching, fatigue and pain. Probably one of the best forms of magnesium is Mag Link. Mag Link is a timed release magnesium chloride. Magnesium chloride is the same type found in the body, and is absorbed and tolerated very well. Usual dosage range is four to six tablets per day in divided dosages. The limiting factor is loose stool or diarrhea. If this should occur back the dosage down by one until it is controlled.

Every insult to the body, every sickness, every stress increases the physiological age (body's organ age) of a person and decreases life expectancy. Aging results from episodes that damage the body. One disease experience tends to lead to another tending to decrease life expectancy. Every person is born with a certain amount of

vitality. Some vitality is reduced with each episode of illness or stress causing us to age.

Control your stress and diminish aging through healthy diet high in fiber, low in fat, abundant vegetables and fruits, minimal sugar and as free as possible of pesticides, preservatives and fillers. Exercise to keep your body in shape with flexibility and strength. Supplement your diet with vitamins, amino acids, minerals and nutrients to help you stay young.

For more information about supplements read:

The Anxiety Epidemic

Break Your Prescribed Addiction

Heal with Amino Acids

Malic Acid and Magnesium for Fibromyalgia and

Chronic Pain Syndrome

Tired or Toxic?

For book information contact Pain & Stress Center at 1-800-669-CALM (2256).

*This article is not intended to give medical advice or
replace the services of a physician.
It is for educational purposes only.*

Copyright of MMRC Health Educator Reports is the property of M.M.R.C., Ltd. Co. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.