



Additional Information about the Biofeedback System: Internal and Environmental Stressors

The impact of Stress

Stress affects us all. The deleterious effects of excess stress have been well documented in a wide range of medical publications. We know that chronic stress plays a significant role in any disease. It alters biochemistry and neurological functioning and therefore may weaken our immune system.

Acute stress triggers the body's response to perceived threat or danger, our 'fight-or-flight' response. Our sympathetic nervous system is activated by releasing hormones like adrenalin and cortisol into our blood to speed up heart rate, slow down digestion, shunt blood flow to major muscle groups and change various other autonomic nervous functions, all to provide our body with a burst of energy and strength. When the perceived threat is gone, our body is designed to return to normal function via the relaxation response, our parasympathetic nervous system.

We are well equipped for these short intense moments of stress. However, in our lives today the fight-or-flight response is often activated inappropriately over a long period of time through daily incidents leading to chronic stress and to a continuous elevation of our stress hormones.

Many people think of stress only in terms of mental and emotional strains like deadlines at work, family or relationship issues, financial pressures, traffic jams, or the death of a loved one perhaps. However, stress reactions also occur when we feed our bodies highly processed food (nutritional stress) or when we are exposed to environmental toxins, pathogens or allergens (environmental stress).

What are the Benefits of Biofeedback?

Research shows that the benefits of biofeedback may include the following:

- Improved general health and sense of well being
- Ability to relax more quickly
- Reduction of stress, tenseness and nervousness
- Enhanced mental clarity, memory and improved attention
- Heightened muscle mobility, coordination, flexibility
- Decreased pain

Everyone can gain from biofeedback therapy. It is often perceived as a relaxing, soothing and calming experience. The biofeedback process is completely non-invasive and gentle. It provides a powerful stress management support system to ignite a person's healing process. The process of biofeedback helps the body remember a balanced and stress-free state.

Environmental Stressors

The CyberScan biofeedback system also provides a comprehensive database of environmental signals including signals on electromagnetic smog and geopathic stress among others, which will be explained below.

What is Electromagnetic Smog?

The term electromagnetic smog refers to all artificially generated electromagnetic fields in the environment and the resulting permanent exposure of people and the environment to them.

It is sub-divided into low-frequency electric and magnetic fields and high-frequency electromagnetic fields.

Electric and magnetic fields in the low-frequency range are generated through electric appliances. High-frequency electromagnetic fields are generated by wireless technology.

Occasional exposure to high electromagnetic fields is not likely to pose a health risk to most people. However, exposure to high electric and/or magnetic fields over a long period of time (e.g. during sleep), may cause health issues.

The most common sources of wireless electromagnetic smog are:

- Cordless phones
- Mobile phones
- Mobile phone towers
- High voltage transmission and power lines
- Wireless networks
- Smart meters
- Baby monitors
- Lighting

Exposure to electromagnetic fields can cause in certain individuals a condition known as Electromagnetic sensitivity (**ES**) or Electromagnetic hypersensitivity (**EHS**) with a broad spectrum of non-specific symptoms involving multiple organ systems.

EHS symptoms may include:

- Insomnia, fatigue, nausea and headaches
- Palpitations, chest pain, increased heart rate and blood pressure changes
- Restlessness, irritability, poor short-term memory, difficulty concentrating, dizziness, dyslexia, forgetfulness and learning difficulties
- Body aches, muscle spasms, restless legs
- Burning, prickling and biting sensation on the skin, rashes, skin lumps
- Ringing in the ears (tinnitus), hearing loss, impaired balance
- Impaired vision, dry and gritty eyes.

Electromagnetic fields emitted from cell phones and wireless devices were classified as a possible human carcinogen by the World Health Organisation in May 2011.

What is Geopathic Stress?

The most accurate definition of geopathic stress is the study of earth energies and their effect on human beings.

Geopathic stress may arise from both, natural and man-made activities, excavation and mining being two such examples. Daily disturbances of the earth's magnetic field produce variations in geomagnetic activity, which is reportedly associated with widespread effects on human health and behavior. Types of geopathic stressors include geological faults, geomagnetic lines and water courses.

Health concerns due to geopathic stress were first raised by German Doctors in the 1920s when they were investigating cancer clusters in several villages. Most of the health concerns associated with geopathic stress are anecdotal. This is because there is currently no scientific equipment to adequately measure these fields. Symptoms, which may be associated with geopathic stress range from unexplained fatigue, sleep disturbances, mental and behavioral disorders to infertility and chronic immune disorders.