Many practitioners use galvanometric devices to guide their practice. These devices measure skin resistance to the passage of electrical current. The devices are bundled with software that is programmed to make diagnoses and suggest treatments. The procedure is commonly called electrodermal testing (EDT), bioelectrical impedance measurement (BIM), or electroacupuncture of Voll (EAV).

These devices emit a tiny direct electric current that flows through a wire from the device to a brass cylinder that the patient holds in one hand. A second wire goes from the device to a probe, which the operator touches to “acupuncture points” on the patient’s other hand or a foot. This completes a low-voltage circuit, and the device registers the flow of current. The accompanying software responds by generating elaborate charts, pictures, lists of body areas, symptoms, diseases, and/or product lists on a computer screen.

EAV devices are claimed to measure disturbances in the body’s flow of “electro-magnetic energy” along “acupuncture meridians.” Some are said to measure “vibrations,” “resonance,” “stresses,” “excess,” “deficiency,” and/or “imbalance” claimed to be associated with body tissues and/or organs. However, the only thing they measure is electrical resistance of the patient’s skin when touched by a probe. Skin resistance is influenced by the moistness of the skin and the tightness of the connection between the probe and the skin. If the skin moistness remains constant—as it usually does—the variable that influences the measurement is how hard the probe is pressed against the patient’s skin.

EAV devices are used throughout the world by many chiropractors, acupuncturists, dentists, “holistic” physicians, veterinarians, self-styled “nutritionists,” and various unlicensed individuals. The most common use is for prescribing homeopathic products, dietary supplements, and/or herbal products. They are also used to determine “allergies,” detect “nutrient deficiencies,” and locate alleged problems in teeth that contain amalgam fillings. Some operators claim to tell whether a disease, such as cancer or AIDS, is or is not present. Some devices are claimed to treat the patient with electromagnetic impulses transmitted into the body or are used to “energize” products. However, galvanic skin resistance has no logical relationship to the diagnosis or treatment of any disease.

EAV devices pose several serious risks. The transmission of false or misleading health information can cause emotional harm, a false sense of security, or other false beliefs that can lead to unwise decisions. Some patients become very frightened and wind up undergoing expensive medical tests that show that the diagnosed conditions were not present. Many patients waste hundreds or even thousands of dollars for the test and recommended treatment.

A few companies have obtained 510(k) clearance (not approval) by telling the U.S. Food and Drug Administration (FDA) that their devices are substantially similar to devices previously cleared for biofeedback or skin-resistance measurement. The 510(k) clearance enables manufacturers to market these devices for biofeedback or skin-resistance measurement but not for diagnosis or treatment.

EAV devices are not actually biofeedback devices. Biofeedback is a relaxation technique that uses an electronic device that continuously signals pulse rate, muscle tension, skin resistance, or other body function by tone or visual signal. In biofeedback, the signal originates and is influenced by the patient. In electrodermal testing, the signal is influenced by how hard the operator presses the probe against the patient’s skin. (Pressure makes the electric current flow more easily between the device and the patient’s skin.)

Electrical devices used to diagnose and treat disease must have FDA approval prior to marketing. No EAV device has ever been FDA-approved. Their 510(k) applications fail to reveal that the device would be bundled with software intended to diagnose and/or prescribe, which would make them ineligible for 510(k) clearance.

In the United States, the FDA has primary jurisdiction over manufacturers and distributors and state agencies have primary jurisdiction over practitioners. The FDA has banned importation of EAV devices into the United States and prosecuted or warned a few marketers. Foreign and state regulatory agencies have also taken a few actions. However, no systematic effort has been made to drive them from the marketplace.

Electrodermal skin testing has no scientific validity. SFSBM advises consumers to avoid it and the practitioners who offer it.

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