Legros, A. 2004
Effets d'un champ magnétique d'extrêmement basse fréquence sur les micro mouvements segmentaires humains. (Effects of an extremely low-frequency magnetic field on segmentary microtremors in humans) Thesis
Montpellier (FR) : Université de Montpellier. 253 p. (Thesis in French)

Abstract

As new exposure limits for magnetic fields (MFs) are set in Europe and around the world, there is a need to gather accurate information on their possible effects on the central nervous system (CNS) and peripheral nervous system during exposure. The existing recommendations to limit the magnetic field level to which workers are exposed are mainly issued by two organizations: the International Commission for Non-Ionizing Radiation Protection (ICNIRP) and the Institute of Electrical and Electronics Engineers (IEEE). Their aim is to prevent any harmful effects on the nervous system. The recommended limits are sometimes exceeded, particularly for power utility workers who work in the immediate vicinity of equipment that generates high alternating currents. In 1997, an international conference on the biological effects and health risks of MFs at extremely low frequencies (ELF) was held in Bologna, Italy. Following this conference, sponsored by the World Health Organization (WHO), ICNIRP and others, Repacholi and Greenebaum (1999) published an overview of the research needed to improve understanding of the effects of MFs on humans. They stressed the need to explore how the neurophysiological indicators of CNS activity and operation can be affected by ELF MFs. They also stated that the reports published on the topic should include information about the smallest effects that can be detected.