Title of Talk:

Effects of Extremely Low Frequency (ELF) Pulsed Electromagnetic Field (PEMF) On Cerebral Haemodynamic

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Abstract
Investigations have been conducted on the validity of the ELF-PEMF as therapeutic tools. The results obtained since 1999 provide confusing indicators to the therapeutic value of ELF-PEMF. They have been discussed in my Master of Engineering and Science thesis. From those results it appeared that, regardless of the therapeutic effect, the ELF-PEMF had effect on Blood Pressure (BP) and Heart Rate (HR) and from a questionnaire filled in by the subjects, it appeared that sometimes a relaxing effect was noticed.

No bibliographic reference was found describing this “relaxing effect”. It was decided to further investigate this by-product of the therapeutic sessions by looking into possible changes in the cerebral haemodynamics.

A relatively new research tool, Near Infrared Spectroscopy (NIRS), was selected for a pilot investigation of cerebral haemodynamics during ELF-PEMF stimulus. Preliminary results show that there are cerebral haemodynamic changes corresponding to the observed variation in the BP and HR.

The results from the pilot study suggest that further investigation is required to understand the “relaxing effect” and its relationship to variations in HR/BP and cerebral haemodynamics.

Short bio
Graduated in 1978 as Electronic and Communication Engineer at RMIT
1994 Postgraduate Diploma in Digital Control - Victoria university of Technology
1998 Master of Engineering – Biomedical Engineering – Swinburne University Of Technology
2001 Master of Engineering and Science – Monash University