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CHAPTER NUMBER

Effects of Electromagnetic Fields in the Living Environment

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1 INTRODUCTION

The title of this Chapter is deliberately ambiguous. It concerns both the role of electromagnetic fields in that part of our environment which is alive and the electromagnetic effects from those environments in which we live.

The writer has been involved since 1974 in experimental research on the interactions of electromagnetic fields with bio-materials and living systems. He cooperated in this with the late Professor Herbert Fröhlich FRS, a theoretical physicist. An early conclusion from this work was that there were anomalous magnetic field effects in water and in living biological systems and that these were only explicable in terms of coherence phenomena.

He first became involved in the diagnosis and therapy of patients hypersensitive to their electromagnetic environment in 1982 at the request of Dr. Jean Monro in London. Working with her electrically hypersensitive patients and those of Dr. W.J. Rea in Dallas, Texas, has given the writer an insight into the extremes of sensitivity and speed of reaction as evidenced by living systems exposed to electromagnetic stress when their dynamic homeostatic regulation has failed (Smith and Best, 1989).

These patients have a long history of existing hypersensitivities to many chemicals, and/or foods and particulates. They may react within seconds to something in their environment and they can readily distinguish *verum* from *placebo*. The frequency of an electromagnetic stress and its coherence (precision) is the clinically important parameter. There is a threshold for the intensity or amplitude of the field at the patient for the onset of any effects but, once this is exceeded its value usually matters little until the onset of thermal effects; it is the frequency which is important. The effects of frequencies are unique to each individual. As the frequency is scanned, therapeutic frequencies usually alternate with stressful frequencies. The clinically effective frequencies range from below 1 milliHertz (1000 sec/cycle) to hundreds of GigaHertz (10 Hz). Identical (false anticipatory) reactions can be triggered in a patient by chemical means and neutralised electrically, or triggered electrically and neutralised chemically; their

