

Private Members' Business

dian rhythms and associated hormonal changes, changes in response to drugs and some changes in behaviour.

Regarding humans, laboratory experiments with volunteers showed that people can usually perceive an electric field above 7 kilovolts per metre, but some individuals can perceive fields as weak as 2 kilovolts per metre. Magnetic fields are believed not to be perceived by people.

In a carefully conducted study it was found that exposure to fields did not change most vital signs, physiological parameters, daily life activities, memory span and fatigue. But small changes in the heart rate, slowing by 3 beats per minute, were observed in some individuals. Also, small effects on alertness and reaction time were observed.

Limited epidemiological studies have indicated an increased incidence of cancer, particularly leukaemia and brain tumours in children living close to high current wires, presumably producing above average magnetic fields in their homes. Studies of workers in so-called electrical occupations have found an increased risk of cancer. Because of limitations of these studies, this evidence can be judged only as suggestive.

It is also known that electro-magnetic fields are used in medical practice for treatment of broken bones which do not want to unite for a long period of time. Other beneficial medical uses are being currently tested such as the prevention of osteoporosis, wound healing and nerve regeneration.

In conclusion, regarding health effects of electro-magnetic fields, we have found the available evidence inconclusive and inconsistent. The emerging evidence does not allow us to categorically assert that there is no health risk, but on the other hand it is not sufficient to prove that there is significant risk. If exposure to fields does not turn out to pose a health risk, it is unlikely that high-voltage power lines will be the only or even the main source of concern. Electrical wiring in buildings, appliances and light fixtures are much more common and could play a far greater role than high voltage transmission lines in any public health program.

In this complex situation we did recognize a few years ago that both more departmental involvement in this area and, even more important, more research was needed. In the fall of 1986 we formed a working group of

electric and magnetic fields. The group consists of representatives of labour, utilities, academia and provincial and federal governments. The purpose of the group was to assess health effects, to foster research and to educate the Canadian public. In the spring of this year we received their report which will be published shortly. Their assessment of the current status of knowledge is quite similar to ours as I earlier outlined. The report also calls for an increased research effort and departmental involvement.

Another important action that we have taken is the signing of an agreement with two Canadian utility companies, Ontario Hydro and Hydro Quebec, to sponsor an important animal study. The National Health Research and Development Program has allocated over \$400,000 for this study to take place over a three year period. The study concerns effects of chronic exposure to magnetic fields on cancer development. The study will be done by an independent university research team and will be subject to a strict peer review process.

In our laboratories we have also just finished the first stage of a pilot animal study which we are planning to continue. This project deals with the possibility of cancer promotion by magnetic fields.

In summary, this government recognizes the importance of resolving through research the issue of health effects of electro-magnetic fields as underscored by our recent increase in research expenditures. This enhanced level of activity will be assisted also by an ongoing effort in the U.S. and Europe which we are closely monitoring. We anticipate that in the next three to four years a better data base will be available. At that time we certainly will further reassess the score of Canadian research on the issue.

We therefore wholeheartedly support the principles behind the hon. member's bill but we would suggest that the government's activities show a real concern in this area and represent the best route at this time.

Mr. David D. Stupich (Nanaimo—Cowichan): Mr. Speaker, I would like to join with the member who proposed this motion. I have listened with a great deal of interest to the statement from the government and look forward to reading it in more detail to try to learn what it is all about. I appreciate that the government is paying attention to this and I am pleased that the government