

Electronic smog

The curse of the mobile phone age: around your home there are countless gadgets whose electrical fields, scientists now warn, are linked to depression, miscarriage and cancer

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Invisible "smog", created by the electricity that powers our civilisation, is giving children cancer, causing miscarriages and suicides and making some people allergic to modern life, new scientific evidence reveals.

The evidence - which is being taken seriously by national and international bodies and authorities - suggests that almost everyone is being exposed to a new form of pollution with countless sources in daily use in every home.

Two official Department of Health reports on the smog are to be presented to ministers next month, and the Health Protection Agency (HPA) has recently held the first meeting of an expert group charged with developing advice to the public on the threat.

The UN's World Health Organisation (WHO) calls the electronic smog "one of the most common and fastest growing environmental influences" and stresses that it "takes seriously" concerns about the health effects. It adds that "everyone in the world" is exposed to it and that "levels will continue to increase as technology advances".

Wiring creates electrical fields, one component of the smog, even when nothing is turned on. And all electrical equipment - from TVs to toasters - give off another one, magnetic fields. The fields rapidly decrease with distance but appliances such as hair dryers and electric shavers, used close to the head, can give high exposures. Electric blankets and clock radios near to beds produce even higher doses because people are exposed to them for many hours while sleeping.

Radio frequency fields - yet another component - are emitted by microwave ovens, TV and radio transmitters, mobile phone masts and phones themselves, also used close to the head.

The WHO says that the smog could interfere with the tiny natural electrical currents that help to drive the human body. Nerves relay signals by transmitting electric impulses, for example, while the use of electrocardiograms testify to the electrical activity of the heart.

Campaigners have long been worried about exposure to fields from lines carried by electric pylons but, until recently, their concerns were dismissed, even ridiculed, by the authorities.

But last year a study by the official National Radiological Protection Board concluded that children living close to the lines are more likely to get leukaemia, and ministers are considering whether to stop any more homes being built near them. The discovery is causing a large-scale reappraisal of the hazards of the smog.

The International Agency for Research on Cancer - part of the WHO and the leading international organisation on the disease - classes the smog as a "possible human carcinogen". And Professor David Carpenter, dean of the School of Public Health at the State University of New York, told The Independent on Sunday last week that it was likely to cause up to 30 per cent of all childhood cancers. A report by the California Health Department concludes that it is also likely to cause adult leukaemia, brain cancers and possibly breast cancer and could be responsible for a 10th of all miscarriages.

Professor Denis Henshaw, professor of human radiation effects at Bristol University, says that "a huge and substantive body of evidence indicates a range of adverse health effects". He estimates that the smog causes some 9,000 cases of depression.

Perhaps strangest of all, there is increasing evidence that the smog causes some people to become allergic to electricity, leading to nausea, pain, dizziness, depression and difficulties in sleeping and concentrating when they use electrical appliances or go near mobile phone masts. Some are so badly affected that they have to change their lifestyles.

While not yet certain how it is caused, both the WHO and the HPA accept that the condition exists, and the UN body estimates that up to three in every 100 people are affected by it.

Case History: 'I felt I was going into meltdown'

Until a year ago, Sarah Dacre reckoned she had a "blessed life". Running her own company, and living in an expensive north London home, the high-earning divorcee described herself as "fab, fit and 40s". Then suddenly the sight in her right eye failed: she first noticed it when she was unable to read an A-Z map. Soon she was getting pains and numbness in her joints. She could not sleep and spent nights "pacing about like a caged lion". Her short-term memory failed and if she took notes to remind her, she would forget she had made them.

The symptoms got worse whenever she was exposed to electricity. She could not use a computer for more than five minutes without becoming nauseous. Even using a telephone landline gave her a buzzing in the ear and made her feel she was "going into meltdown".