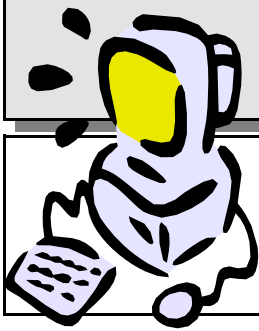


EMR Association of Australia



The facts about Computers

The computer technology that has revolutionised our offices, our businesses, our homes and even our cars has thrust us out of the industrial age and onto the information superhighway. But as we race furiously forward, could we be running into a mire of health problems?

Why protect workers from the radiation emitted by computers?

- 1 Computer monitors (VDUs) emit Extremely Low Frequency fields, radiofrequency radiation, electrostatic fields, x-rays and a small amount of gamma-radiation.
- 2 Many workers have developed allergies to EMR after prolonged use of computers. In Sweden the problem is particularly severe, with thousands of workers affected, many of whom have joined the FEB (Swedish Association for the ElectroSensitive).
- 3 Many of the symptoms experienced by computer workers - sore eyes, headaches, concentration and memory problems - reduce employee efficiency.
- 4 Protecting workers reduces the loss of experienced personnel. (In Sweden, where there is a high rate of allergies to EMR among computer workers, this has been a particular problem.)
- 5 Protecting workers also reduces the risk of litigation in the future, should electromagnetic radiation be proven to cause health problems.

How do computers affect people's health?

Using a computer has been linked to:

- eye problems - difficulty seeing, pain, sensation of grit in eyes ¹
- skin problems - dryness, redness, blotchiness ¹
- headaches ¹
- memory loss ¹
- nasal problems including sinusitis ¹
- tiredness ¹
- dizziness ¹
- numbness in arms and legs ¹
- facial pain, blisters, metallic taste in mouth ¹
- breathing problems/heart palpitations ¹
- joint pains ¹
- allergies to EMR¹
- miscarriages ²
- birth defects ²

- brain tumour ³

What else should you know?

- The magnetic field is strongest at the back and sides of the VDU, so be careful where you place it and where you work.
- A VDU contains at least 50 chemicals which can also impact on human health and may have a synergistic effect when combined with radiation.
- New VDUs with liquid crystal displays emit virtually no fields. However, the Notebook variety has been found to have high electric fields on the keyboards.

How can you protect yourself from radiation from a computer?

Here are some simple precautions you can take to reduce your exposure:

- buy a low emission monitor,
- reduce the amount of time spent using a computer, particularly on computer games,
- don't arrange computers where operators (eg in banks) are exposed to the radiation from the backs and sides of other computers,
- keep the computer screen as far away from you as you can manage,
- attach a radiation-reducing conductive screen to the VDU and earth it to the back of the computer,
- avoid wearing metal objects - which concentrate radiation - while using a computer ,
- avoid computer use during pregnancy - seek alternative duties,
- don't place a bed on the other side of the wall from a computer, as emissions travel effortlessly through walls,
- before you use a new computer, leave it turned on for a few days in an empty, ventilated room to allow for chemical outgassing,
- turn off the computer when it is not in use.

EMRAA also encourages unions to keep a record of complaints from members who have experienced health problems associated with using computers.

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Applying precautions

ACTU Guidelines

The ACTU has developed *Guidelines for Screen Based Work* (May 1998) which is based on a policy of prudent avoidance.

It recommends the following maximum emissions, measured at 50 cm from the VDU and 30 cm from the front of the screen:

- an electric field of less than 10 V/m at 5Hz to 2kHz
- an electric field of less than 1 V/m at 2 kHz to 400 kHz
- a magnetic field of less than 2 mG at 5 Hz to 2 kHz
- a magnetic field of less than 0.25 mG at 2 kHz to 400 kHz.

The policy also recommends purchase of VDUs with low electrostatic potential to “prevent dust particles moving from the screen to the user due to differences in potential.”

Swedish Union of Clerical and Technical Employees in Industry (SIF)

The SIF has developed a policy of “Noll Risk” (No Risk) which aims to create workplaces and practices that are free from health risk. It aims to empower workers with knowledge and to encourage the design and manufacture of equipment that reduces exposure. ⁴

Industry Initiatives

According to the SIF, in Sweden “Many companies are now changing their strategy. Instead of waiting for limit values or directives from the authorities, they are being proactive in meeting the increasing demand for environmentally-adapted products.”

One such company is Ellemtel which has taken extensive action to reduce fields in its offices to accommodate the large number of electrically sensitive people in its employment. Fewer cases of electrical sensitivity were reported subsequently.

Low-emission monitors

As a result of negotiations between Swedish unions, consumers and health and safety bodies, a new emission level of 2.5 mG (milligauss) was decided upon. These low-emission screens are now in wide use throughout the world.

References

1. “Hypersensitive in IT Environments”, Swedish Union of Clerical and Technical Employees in Industry, 1998.
2. Goldhaber, M et al, *Am J Ind Med*, vol 13, no 6, 695-706, 1988.
3. Ryan, P et al, *Int J Cancer*, vol 51, no 1, 20-7, 1992.
4. *NOLL Risk*, SIF, Stockholm, 1999.



I thought this thing was supposed to make life easier!

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