

# • *Mobile Phones*

*Last updated in October 2003*

Mobile phones are now commonplace. There are around 25 million users in the UK. However, there is growing concern over their safety and there are a number of issues of relevance to UNISON members connected with mobile phones. These are:

- health risks,
- driving and refuelling a vehicle,
- personal protection, and
- stress.

## **HEALTH RISKS**

Worries about mobile phones have been around since the mid 1990s when there were a number of cases of brain cancer which were linked in the press to the excessive use of mobile phones.

Mobile phones emit and receive low level microwave radiation. The levels appear to comply with UK exposure limits and there is no conclusive evidence that they pose a significant cancer risk to humans. However, some evidence of risk is available from experiments that have taken place on animals, and proper testing of health risks has not yet taken place. In April 1999 the WHO announced a \$6 million study of 3000 people to ascertain whether there is any evidence either way.

A government study published in May 2000, indicated that there was no conclusive proof of brain cancer or memory loss, although mobile phones can lead to a small warming of the brain which might have unknown long-term effects. The report indicated that children were likely to be most at risk and should be discouraged from using mobile phones.

Following the report the government prepared a leaflet, which is now given out with every phone sold. This leaflet advises users to keep calls brief and to discourage children from using mobiles except in emergencies. A follow up research project was also announced in December 2000.

In September 2001, a further study showed that use of mobile phones for up to 10 years increased the risk of brain cancer by 26%. For use over 10 years, the risk was increased by 77%. However, this study was with analogue phones which were phased out in 1997. Digital phones emit less radiation, but because the radiation is pulsed, it is possible that it may actually be more damaging. Further concerns have since been expressed over the new third generation "3G" phones which operate at a higher frequency than traditional mobiles. Research in the Netherlands published in 2003 indicated that there may be greater risk of nausea, headaches and tingling from these, but the long-term effects are unknown.

Certainly the phone manufacturers themselves are concerned about the possibility of a link with ill-health being shown in the future and a number of patents have recently been taken out on ideas which would reduce or block radiation outputs.

The easiest way to reduce any possible risk is to have the radiation source as far away from the brain as possible, and even a few centimetres can drastically reduce exposure levels. Hands-free add-ons have also become more popular. However, recent research from the Consumers Association has indicated that, in some cases, the earpieces act as an aerial and increases the amount of radiation being channelled into the user. The Australian Consumers Association however have found that hand-free sets reduce the effects of radiation by 90% However they recommend that when making calls from a hand-free set the phone should be kept in a bag or on a table to keep it away from the body.

The government advice to consumers is that they check the “specific absorption rate” (SAR) value, which is given for each mobile. The SAR value reflects the rate at which radiation from the handset is absorbed by the body. However few people would be able to make sense of this information, and it is usually only given in the technical detail at the back of the manufacturers manual. A European standard in SAR is due to be introduced next year.

Some companies have begun to sell barriers, which they claim shield the mobile phone user from the microwave radiation. A government report, published in May 2002, indicated that these had varying effects as the phone reacts to its signal being blocked by increasing its output.

At the moment the best we can say is that the link between mobile phones and illness has not yet been proven, but common-sense precautions should be taken.

## **MOBILE PHONES AND DRIVING**

The links between using a mobile phone when driving and road accidents is clear. This applies not only to hand held phones but to all phones, including hand-free phones. A driver’s attention is needed at all times. In January 2000, the Government begun a campaign to bring this hazard to the attention of all mobile phone users.

The Royal Society for the Prevention of Accidents is campaigning for a change in the law to prevent people using mobile phones in moving cars. In February 1999, the Highway Code was amended to include a new section which warns “Never use a hand-held mobile phone or microphone while driving”. It goes on to warn that even hand-free systems are “likely to distract your attention from the road”.

Drivers must have proper control of their vehicles at all times. The police advise that the offences of “careless and inconsiderate driving” and “failing to have proper control of a vehicle” provide them with sufficient powers to prosecute where appropriate if people are driving while using a hand held mobile phone. A number of drivers have been imprisoned after accidents while they were talking on a mobile phone.

## **NEGOTIATING ADVICE**

- Employers should ensure that mobile phones are not used excessively and that where landlines are available, they should be used.
- Employers could be asked to provide BT chargecards so that employees can make work calls from a client’s premises or call boxes.
- The use of pagers should be considered.

## **ADVICE FOR INDIVIDUALS**

- Members should only use a mobile phone when it is necessary to do so and for no longer than is necessary.
- Members should not use a mobile phone whilst driving and should switch off mobile phones before refuelling their vehicles.
- When using a phone ensure the antenna is fully extended.
- Avoid contact with the phone or aerial when making a call
- Use a landline phone or pager wherever possible.

## **CORDLESS PHONES**

Questions over the safety of mobile phones have inevitably led to questions over the safety of cordless phones. Like mobile phones, cordless phones use radio signals to communicate with their base station. With cordless phones however, the base station, normally the handset cradle, is usually only metres away. The signals sent by cordless phones are therefore much weaker than those sent by mobile phones.

The NRPB says that the power radiated by cordless phones is only 8% of that from mobile phones. Therefore, it follows that if there is any risk to health from cordless phones, it will be substantially less than that from mobile phones. Since the exposure caused by cordless phones is many times below the guideline levels, their use is not considered a health hazard by the NRPB.