

## CHEMICAL, BIOLOGICAL OR RADIOLOGICAL HAZARDS TO EXPECTANT AND NEW MOTHERS



Chemical, Biological or Radiological hazards can present a risk to health at a very early stage of pregnancy. The guidance provided in this leaflet is intended to support the health of an unborn or recently born child.

**CHEMICAL HAZARDS:** Can enter the body by inhalation, ingestion, injection or absorption through the skin. Some substances are particularly hazardous to those trying to conceive a child or to new or expectant mothers. These include Carcinogens, Teratogens and Mutagens and they may be identified by the following risk phrases that are found on chemical safety data sheets:

<b>R40</b>	Possible risk of irreversible effects
<b>R45</b>	May cause cancer
<b>R46</b>	May cause heritable genetic damage
<b>R49</b>	May cause cancer by inhalation
<b>R60</b>	May impair fertility
<b>R61</b>	May cause harm to the unborn child
<b>R62</b>	Possible risk of impaired fertility
<b>R63</b>	Possible harm to the unborn child
<b>R64</b>	May cause harm to breastfed babies

It is vital that potential exposure to these chemicals is carefully controlled. A Maternity Risk Assessment will ensure proper protection is given to new and expectant mothers working in laboratories where such chemicals are used.

**BIOLOGICAL HAZARDS:** Hazardous biological agents are classified by the HSE into 4 categories with Hazard Group 4 being the most dangerous. At Bangor University, Hazard Group 2 organisms are used in a number of teaching and research laboratories. Some of these Hazard Group 2 organisms, eg *Listeria* found in some unpasteurized cheeses, pose a risk to pregnant women.

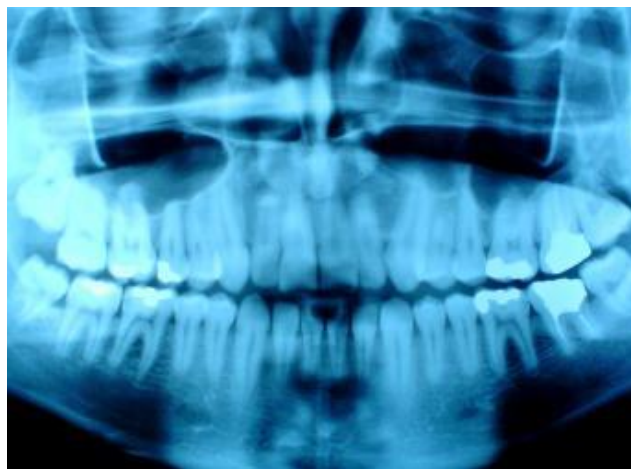




When working with animals there may be a risk if the animal is infected with an agent that may be transmitted to humans. Some of these zoonotic diseases, such as *Chlamydia psittaci*, are also a risk to pregnant women. For this reason pregnant women should not work with pregnant ewes and a Maternity Risk Assessment is required for all work involving animals or in laboratories where Hazard Group 2 organisms are used.

**RADIATION:** The main occupational sources of Ionising Radiation are from the operation of x-ray machines and the use of open radiation sources. You must tell the Radiation Protection Officer as soon as you know you are pregnant so that extra controls can be put in place if required to protect the developing child.

Non-ionising radiation comes from ultraviolet and infra red sources and lasers. These do not present an enhanced risk to pregnant or breast feeding women. Other sources of non-ionising radiation are electromagnetic fields and waves. Exposure to electric and magnetic fields should be kept within the limits set by the 'Health Protection Agency'.



**FURTHER INFORMATION:** The following provide useful sources of information. In addition, if you have any concerns or queries please don't hesitate to get in touch with Joe Patton or Dr John Latchford:

1. Health and Safety Services - [hss.bangor.ac.uk](http://hss.bangor.ac.uk)
2. Michele Lake, Occupational Health Practitioner – **01248 382575 / ext 2575**
3. Dr John Latchford, University Radiation Protection Adviser and Biological Safety Officer **01248 382524 / ext 2524**
4. Expectant and New Mothers Handbook (HSS Website)