



University Occupational Health and Safety Standard Guidance Note

NEW AND EXPECTANT MOTHERS – HAZARD IDENTIFICATION AND RISK CONTROL

Hazard identified	Risk	Information about controls	Legislation
Physical			
Shocks, vibration or movement	<ul style="list-style-type: none"> Regular exposure to shocks or low frequency vibration, or excessive movement may increase the risk of miscarriage. Long-term exposure and heavy physical work may increase the risk of prematurity or low birth weight. Breastfeeding / chestfeeding workers are at no greater risk than other workers. 	<ul style="list-style-type: none"> Refer to the OHS Vibration at Work Standard. Pregnant workers and those who have recently given birth are advised to avoid work likely to involve uncomfortable whole-body vibration, especially at low frequencies, or where the abdomen is exposed to shocks or jolts. 	The Control of Vibration at Work Regulations 2005
Manual handling	<ul style="list-style-type: none"> NEMs are especially at risk from manual handling injury. Hormonal changes can affect ligaments, increasing susceptibility to injury; and postural problems may increase as the pregnancy progresses. There can also be risks for those who have recently given birth, for example after a caesarean section there is likely to be a 	<ul style="list-style-type: none"> Refer to the OHS Manual Handling Standard. It may be necessary to address the specific needs of the NEM and reduce the amount of physical work, or provide aids to reduce the risks. 	Manual Handling Operations Regulations 1992 (Amended 2002)

	<p>temporary limitation on lifting and handling capability.</p> <ul style="list-style-type: none"> • There is no evidence to suggest that breastfeeding / chestfeeding people are at a greater risk from manual handling injury than any other worker. 		
Noise	<ul style="list-style-type: none"> • There appears to be no specific risk to NEMs or to the foetus, but prolonged exposure to loud noise may lead to increased blood pressure and tiredness. • No particular problems for women who have recently given birth or who are breastfeeding / chestfeeding. 	<ul style="list-style-type: none"> • Refer to the OHS Noise Standard. • The requirements in the Local Rules should be sufficient to meet the needs of new or expectant mothers. 	The Control of Noise at Work Regulations 2005.
Movements and postures	<ul style="list-style-type: none"> • Excessive physical or mental pressure may cause stress and can give rise to anxiety and raised blood pressure. • Standing: Continuous standing may lead to dizziness, faintness, and fatigue. It can also contribute to an increased risk of premature childbirth and miscarriage. • Sitting: Pregnancy-specific changes pose a relatively high risk of thrombosis or embolism, particularly with constant sitting. In the later stages of pregnancy, women are more likely to experience backache, which can be intensified by remaining in a specific position for a long period of time. 	<ul style="list-style-type: none"> • Ensure that hours of work and the volume and pacing of work are not excessive and that, where possible, the new or expectant mother should have some control over how their work is organised. • Ensure that seating is available where possible. • Longer or more frequent rest breaks will help to avoid or reduce fatigue and benefit other symptoms related to pregnancy or following giving birth. • Adjusting workstations or work procedures may help remove postural problems and risk of accidents. Alternative or additional equipment may be required. 	None specific.

	<ul style="list-style-type: none"> • Restricted space: Difficulties in working in tightly fitting workspaces or workstations during the later stages of pregnancy can lead to strain or sprain injury, also with impaired dexterity, agility, coordination, speed of movement, reach and balance. Also, associated increased risk of accidents. 		
Ionising Radiation	<ul style="list-style-type: none"> • Significant exposure to ionising radiation can be harmful to the foetus and this is recognised by placing limits on the external radiation dose to the abdomen of the expectant mother for the declared term of her pregnancy. • There may be a risk to the foetus from significant amounts of radioactive contamination breathed in or ingested by the mother and transferred across the placenta. • Under present usage practices in the University, it is very unlikely that the abdomen dose limit for the period of pregnancy will be approached by any radiation worker. Nevertheless, the pregnant employee or the University may request placing the worker in alternative employment during the pregnancy. • If a nursing mother works with radioactive liquids or dusts, these can cause exposure to child, particularly through 	<ul style="list-style-type: none"> • Refer to the OHS Ionising Radiation Standard. • Radiation workers, classified or non-classified, must seek advice from the University Radiation Protection Officer (URPO) as early as possible. It is advised that the Department Radiation Protection Supervisor (DPRS) is also notified. • Work procedures should be designed to keep exposure of the pregnant people as low as reasonably practicable and certainly below the statutory dose for pregnant women. • The working conditions should be such as to make it unlikely that a pregnant people might receive high accidental exposures to radioactive contamination. • Special attention should be paid to the possibility of nursing mothers receiving radioactive contamination and they should not be employed in work where 	<ul style="list-style-type: none"> • Ionising Radiations Regulations 2017 (IRR17) and supporting Approved Codes of Practice.

	contamination of the mother's skin.	the risk of such contamination is high.	
Artificial Optical Radiation	Pregnant or breastfeeding / chestfeeding people are at no greater risk than other workers.	Refer to the OHS Artificial Optical Radiation Standard .	The Control of Artificial Optical Radiation at Work Regulations 2010.
Electromagnetic Fields	Exposure to electric and magnetic fields within current recommendations is not known to cause harm to the foetus or the mother. However, extreme over-exposure to radio-frequency radiation could cause harm by raising body temperature.	<ul style="list-style-type: none"> Refer to the OHS Electromagnetic Fields Standard. Any pregnant employees working with EMFs (as defined by the OHS Standard on EMFs) must be treated as a person at particular risk, and a NEMs risk assessment must be completed. Exposure to electric and magnetic fields should not exceed the restrictions on human exposure published by the Radiation Protection Division of the Health Protection Agency. 	The Control of Electromagnetic Fields at Work Regulations 2016.
Work in hyperbaric atmosphere, for example pressurised enclosures and underwater diving.	<ul style="list-style-type: none"> <i>Compressed air</i>: People who work in compressed air are at risk of developing 'the bends'. This is due to free bubbles of gas in the circulation. It is not clear whether pregnant women are more at risk of 'the bends', but potentially the foetus could be seriously harmed by such gas bubbles. For those who have recently given birth there is a small increase in the risk of 'the bends'. There is no physiological reason why a breastfeeding / 	Pregnant workers should not work in compressed air.	Work in Compressed Air Regulations 1996.

	<p>chestfeeding people should not work in compressed air (although there would be obvious practical difficulties).</p> <ul style="list-style-type: none"> • <i>Diving</i>: Pregnant workers are advised not to dive <i>at all</i> during pregnancy due to the possible effects of exposure to hyperbaric environment on the foetus. • There is no evidence to suggest that breastfeeding / chestfeeding and diving are incompatible. 	<p>Pregnancy is viewed as a medical reason not to dive. The diving regulations include the provision that if a diver knows of any medical reason why they should not dive, they should disclose it to the dive supervisor and/or refrain from diving. The diving regulations also require all divers to undertake an annual medical examination. In the HSE guidance leaflet on the medical examination of divers, doctors are advised that pregnant workers should not dive.</p>	<p>The Diving Operations at Work Regulations 1997.</p>
Hazard identified	Risk	Information about controls	Legislation
Biological			
<p>Any biological agent of hazard groups 2, 3 and 4 but particularly those known to cause abortion of the foetus, or physical or neurological damage:</p> <p>Brucella spp. Chlamydia (psittaci / trachomatis). Listeria monocytogenes. Mycobacterium tuberculosis (TB). Treponema pallidum (syphilis). Toxoplasma gondii. Cytomegalovirus. Herpes simplex. Hepatitis virus. HIV. Paramyxoviridae (mumps / measles). Parvovirus. Rubella.</p>	<ul style="list-style-type: none"> • Many biological agents can affect the unborn child if the mother is infected during pregnancy. • For certain occupations, exposure to infections is more likely, for example laboratory workers, health care, people looking after animals and dealing with animal products. • Work involving potential exposure to pathogens which cause harm to the foetus should not be permitted. 	<ul style="list-style-type: none"> • Refer to the OHS Biological Safety Standard. • Completion of a written risk assessment is necessary which will take account of the nature of the biological agent, how infection is spread, how likely contact is, and what control measures there are. If there is a known high risk of exposure to a highly infectious agent, then it will be appropriate for the pregnant worker to avoid exposure altogether. This assessment of risk should be 	<ul style="list-style-type: none"> • Control of Substances Hazardous to Health Regulations 2002. • The Approved List of Biological agents.

		<p>included in the NEMs assessment or cross referenced.</p> <ul style="list-style-type: none"> • Further advice can be sought from the University Biological Safety Adviser. 	
Hazard identified	Risk	Information about controls	Legislation
Chemical			
<p>Any chemical agent hazardous to health and in particular those assigned with the following hazard statements:</p> <p>Mutagen. H340: May cause genetic defects. H341: Suspected of causing genetic defects.</p> <p>Carcinogen. H350: May cause cancer. H351: Suspected of causing cancer.</p> <p>Teratogen. H360: May damage fertility or the unborn child. H361: Suspected of damaging fertility or the unborn child. H361d: Suspected of damaging the unborn child. H362: May cause harm to breast-fed children.</p> <p>The following should also be considered:</p> <p>Toxic chemicals like mercury and pesticides.</p> <p>Antimitotic (cytotoxic) drugs.</p> <p>Lead and lead derivatives.</p>	<ul style="list-style-type: none"> • Exposure to chemical agents can cause harm to pregnant workers or new mothers and their child during pregnancy or when breastfeeding / chestfeeding. • Chemical agents may enter the body through a number of different routes: inhalation, ingestion, absorption through the skin or mucous membranes or injection (skin penetration). • In identifying chemical agents which present a particular risk to a new or expectant mother and their unborn child or to their child, particular attention should be given to those labelled with hazard pictograms and those with hazard statements within the safety data sheets. • Further information on adverse effects of common organic solvents and heavy metals can be found in Lane <i>et. al</i>, 'What to Expect When Expecting in lab: A Review of Unique Risks and Resources for Pregnant Researchers in the Chemical 	<ul style="list-style-type: none"> • Refer to the Local Rules on Control of Substances Hazardous to Health, Cytotoxic Substances and Agents and OHS Standard - Lead Safety. • When carrying out a NEMs risk assessment the most recent safety data sheet should be consulted. This will inform if a COSHH assessment is required. • Careful consideration should be given to any work involving chemical agents to ensure that proper protection is provided to NEMs, especially those working in laboratories. Review existing COSHH assessments and controls to identify any further hazards and risks and decide on additional control measures. • Work with chemical agents which may present a significant risk to mother and/or unborn child or through breast / chest milk must be avoided. Consider replacing the chemical agent with a less hazardous substance or remove the mother from specific high-risk activities as appropriate. Where significant 	<ul style="list-style-type: none"> • Control of Substances Hazardous to Health Regulations 2002 (as amended). • EH40/2005 Workplace Exposure Limits (for use with COSHH 2002 (as amended)) • GB Biocidal Products Regulation (GB BPR) • Control of Pesticides (amendment) Regulations 1997). • Control of Lead at Work Regulation 2002

	Laboratory'. Chem, Res. Toxicol. 2022, 35, 163-198.	risk remains, the NEM should not be permitted to work with the chemical agents.	
Hazard identified	Risk	Information about controls	Legislation
Working conditions			
Underground mining work	Mines often have difficult physical conditions and many of the physical agents described in this guidance are a regular part of the mining environment.	A risk assessment must be carried out.	
Display Screen Equipment (DSE)	<ul style="list-style-type: none"> The levels of ionising and non-ionising electromagnetic radiation are not considered to pose a significant risk to health. No special protective measures are therefore needed to protect the health of people from this radiation. Postural / ergonomic problems due to changes in body proportions. Circulation problems due to extended periods of sitting. 	<ul style="list-style-type: none"> Refer to the OHS Display Screen Equipment Standard. Review DSE workstation assessment and make appropriate reasonable adjustments to work pattern and the workstation setup. Alternative or additional equipment may be required during pregnancy or following birth. Ensure the working posture is appropriate and regular breaks are taken. 	Display Screen Equipment Regulations 1992 (Amended 2002).
Temperature - Extremes of cold or heat	<ul style="list-style-type: none"> When pregnant, women do not tolerate heat well and many more readily faint or are more liable to heat stress. The risk is likely to be reduced after birth but it is not certain how quickly an improvement comes about. Breastfeeding / chestfeeding may be impaired by heat dehydration. 	<ul style="list-style-type: none"> Pregnant workers should take great care when exposed to prolonged heat at work. Rest facilities and access to refreshments should be identified in the risk assessment. 	Workplace (Health, Safety and Welfare) Regulations 1992

	<ul style="list-style-type: none"> No specific problems arise from working in extreme cold. 		
Lone working	Pregnant women are more likely to need urgent medical attention.	<ul style="list-style-type: none"> Review and revise access to communications with others. Consider levels of supervision involved. Ensure that emergency procedures consider the needs of NEMs. Consider risks arising from home working. 	
Work at height	It is hazardous for pregnant women to work at heights, for example ladders, platforms.	<ul style="list-style-type: none"> Working at height should be avoided where possible. A risk assessment should consider any additional risks due to work at height (e.g. working on ladders). 	
Work Related Stress	<ul style="list-style-type: none"> Stress is associated in some studies with increased incidence of miscarriage and pregnancy loss, and also with impaired ability to breastfeed / chestfeed. Stress also can contribute to anxiety and depression. 	<ul style="list-style-type: none"> Adjust working conditions and hours. Ensure that necessary understanding, support and recognition is available (consider the return to work). Take account of known organisational stress factors (shift patterns, workloads etc.) and the particular medical and personal factors affecting the individual. 	
Mental and physical fatigue	<ul style="list-style-type: none"> Long working hours, shift work and night work can have a significant effect on the health of NEMs, and on breastfeeding / chestfeeding. 	<ul style="list-style-type: none"> Adjust working hours temporarily, as well as other working conditions, including the timing and frequency of rest breaks. 	

	<ul style="list-style-type: none"> • Because they suffer from increasing tiredness, some pregnant and breastfeeding / chestfeeding people may not be able to work irregular or late shifts or night work, or overtime. • Working time arrangements (including provisions for rest breaks, their frequency and timing) may affect the health of the pregnant person and their unborn child, recovery after childbirth, or ability to breastfeed chestfeed, and may increase the risks of stress and stress related ill health. • Due to changes in blood pressure which may occur during and after pregnancy and childbirth, normal patterns of breaks from work may not be adequate for new or expectant mothers. 	<ul style="list-style-type: none"> • The need for physical rest may increase. As appropriate, allow access to somewhere to sit or lie down comfortably in private and without disturbance. 	
Shift work / night work	<ul style="list-style-type: none"> • Shift work and night work can have a significant effect on the health of new and expectant mothers, and on breastfeeding / chestfeeding. • Because they suffer from increasing tiredness, some pregnant and breastfeeding / chestfeeding women may not be able to work irregular or late shifts or night work, or overtime. 	<ul style="list-style-type: none"> • Consider the provision of rest facilities. • Consider the risk of physical demands of shift and night work if work activities involve security threats; • If a medical certificate is provided stating that nightwork could affect the NEM's health and safety, the Department must take the following steps only if the risk arises from work. Step 1: Offer suitable alternative daytime work if any is 	

		<p>Step 2: available; or if that is not reasonable then; Suspend the NEM from work (i.e. paid leave) for as long as is necessary to protect the NEM's health or safety.</p>	
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