

**Information leaflet for pregnant employees at the Faculty of
Science
University of Southern Denmark**

Health and safety at work during pregnancy and breastfeeding

Take extra care with teratogenic agents.

Avoid repeatedly handling objects over 12 kg.
Do not lift more than 1000 kg per day.
Lift only when conditions are optimal.

Alternate between work that involves sitting, standing and walking. Avoid standing and walking too much.
Practice variation and relief in line with the growth of the stomach.

Avoid unnecessary strain when carrying, pulling and pushing.

Avoid handling objects over 5-6 kg.
Do not lift over 500 kg per day.
Lift only when conditions are favorable.

Take extra rest breaks as required.
Remember to put your feet up.

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Pregnancy policy at the Faculty of Science

It is the aim of the Faculty of Science to ensure a good and safe work environment so that the pregnant employee can continue to work safely and in a responsible manner throughout the pregnancy and until maternity leave is taken.

Aims:

- To protect the pregnant employee and fetus
- That expecting parents experience the Faculty of Science as a safe workplace
- That the pregnant employee can continue working for as long as possible
- To describe the options available for the pregnant employee in order to organize their work day with the greatest possible consideration for the pregnancy
- To ensure equal treatment of pregnant employees
- To ensure a clear pregnancy policy

In order to ensure a safe workplace, the pregnant employee, colleagues and management must collaborate to make sure that the rules for working during pregnancy are being followed. The workflow should be organized so that potential risk factors are eliminated - either by substitution with other substances, physical aids, personal protection or exemption from certain work processes involving a risk factor. In the event that it is not possible to guarantee a safe work environment for the pregnant employee by means of reorganization of workflow and changed procedures, the pregnant employee should be moved to a different area of work.

Responsibility for planning the pregnant employee's workflow and ensuring that it is completed without risk to the pregnant employee/fetus lies with the closest leader, i.e. the research leaders, department leaders, etc., in collaboration with the health and safety representative. Help and guidance with this matter can be provided by the Health and Safety Group, from SDU's health and safety consultant, advisers, occupational health clinic, etc.

As soon as the daily leader is informed that an employee is pregnant or breastfeeding, an individual written risk assessment, APV, is to be completed, and work tasks that involve risk factors may not be carried out before they have been assessed and found to be safe. In the case of laboratory work, if the daily leader does not supervise the pregnant employee, the laboratory supervisor must participate in the declaration, but overall responsibility still remains with the daily leader.

Furthermore, the pregnant employee is obliged to collaborate with colleagues to create safe working conditions as well as abiding by the rules for working during pregnancy. With respect to work planning, the pregnant employee is encouraged to approach the daily leader as early as possible in the pregnancy - particularly if working in a laboratory.

Efforts should be made to make the work environment so safe that special measures for pregnant and breastfeeding employees are unnecessary. In all areas, a general APV should be prepared a minimum of once every three years. In this regard, the work leader in collaboration with the relevant Health and Safety Group/committee must assess whether the workplace is also safe for pregnant and breastfeeding employees. Should any problems for pregnant or breastfeeding employees be detected, measures should be taken to ensure that the problems are avoided or prevented.

In order to ensure a smooth and unproblematic reintegration into the job and workplace, information meetings should be held with the closest leader and colleagues respectively for all employees who return after maternity leave. In these meetings, the employee is to be briefed on what has taken place at the department during their leave, where the department is at present and what the present work tasks are, etc. For some employees it will also be important to keep close contact with the workplace throughout maternity leave.

Provisions by the employer

According to the Danish Working Environment Authority's guidelines regarding the health and safety of pregnant and breastfeeding employees, as soon as an employer is informed that an employee is pregnant or breastfeeding, the employer must ensure that the workplace assessment (APV) includes an assessment of whether the employee is exposed to risks that could be hazardous to the pregnancy or to breastfeeding.

Essentially, the employer should always carry out a risk assessment of any dangerous influences, as well as the strength and duration of these influences. The decision by the employer as to whether a pregnant or breastfeeding employee may carry out a particular work task must be made in relation to the employee's concrete working conditions.

If the employer considers that a risk factor will have a negative impact on the pregnancy or breastfeeding, the employer must do the following, listed in order of priority, in relation to the pregnant or breastfeeding employee:

- Ensure that technical measures are taken or redesign the workplace. If this is not sufficient or possible then
- Change the planning or organization of work tasks. If this is not sufficient or possible then
- Transfer the pregnant or breastfeeding employee to other tasks. If this is not sufficient or possible then
- Decide that the pregnant or breastfeeding employee may not undertake the work in question.

Source: The Danish Working Environment Authority's guidelines for pregnant and breastfeeding employees:

<https://arbejdstilsynet.dk/da/regler/at-vejledninger/g/a-1-8-gravides-og-ammendes-arbejdsmiljoe>

***At NAT-SDU, an individual written pregnancy APV should be completed.
Contact the Health and Safety at Work Group for the relevant form.***

Risk assessments - Occupational Health Clinic

The workplace assessment for the pregnant employee should be prepared by the employer in collaboration with the Health and Safety Group. However, risk assessment in relation to pregnancy can be complicated. If the employer, either alone or in collaboration with a health and safety adviser, is not able to make the necessary assessment, the pregnant employee's own doctor or AMR can refer her to the Occupational Health Clinic, who will be able to help.

The occupational health examination comprises of an interview with a doctor lasting between 30 minutes and 1 hour. During the interview, it is the doctor's task to conduct a detailed review of the pregnant employee's daily work and health and safety in order to detect any potential risk to the fetus or the pregnancy. Risk factors the Occupational Health Clinic look for include physical factors (lifting, pushing, pulling, prolonged walking or standing, extreme temperatures, radiation, etc.), chemical exposure and risk of contagion.

Following the interview, it is sometimes necessary for the doctor to obtain further information, which is often the case when the pregnant employee is exposed to chemical agents. The doctor will assess risk factors and decide whether or not the pregnant employee may continue with her current work.

Sources: Occupational Health's online information system www.armoni.dk

The Danish Working Environment Authority's guidelines for pregnant and breastfeeding employees

<https://arbejdstilsynet.dk/da/regler/at-vejledninger/g/a-1-8-gravides-og-ammendes-arbejdsmiljoe>

Ergonomic, physical/mental effects

Physical effects

The pregnant employee

- should avoid climbing ladders
- from around week 13, work tasks should be arranged so that the pregnant employee can alternate between sitting and walking/standing work
- from around week 13, the pregnant employee may not lift objects heavier than 10-12kg
- from the 20th week, strain of pushing and pulling should be as small as possible
- from week 25, the pregnant employee may not lift objects weighing more than 5-6kg due to the increased reach distance to the object

Mental effects

The pregnant employee should be aware of her own well-being and that pregnancy often requires a reduced work tempo. Pregnant women can find that tasks they were able to do before pregnancy become more difficult.

When pregnant, you should be particularly aware of...

- Braxton Hicks contractions that increase in regularity and duration and become painful
- Back and pelvis pain that does not go away. This often occurs when you ignore your body's need to rest
- Discomfort, headache, perhaps following a poor night's sleep and tension in the whole body
- Difficulty falling asleep and poor sleep quality: thoughts racing about everything you have to do
- You are tense, and when you waken in the morning you are extremely tired. You have difficulty coping with daily tasks, prioritizing and you feel that everybody wants something from you
- You become more and more tearful, irritable and work harder and harder but feel you are achieving less and less
- You choose the easiest option in relation to food. Similarly, you cannot find time to exercise or take breaks throughout the day.

There is a difference between having a busy day at work and being stressed over a long period. However, the difference can be difficult to see and varies from person to person. If you are in doubt or worried about increasing Braxton Hicks contractions talk to your midwife. If there is a long time until your next appointment, call and ask for an extra appointment or contact your own doctor.

Sound - ultrasound

Sound in audible range, i.e. 20-18,000 Hz, does not pose a special risk to the fetus.

The pregnant employee should avoid direct contact with ultrasound, i.e. frequencies over 18,000 Hz. Ultrasound is suspected of being hazardous to pregnancy as direct contact with high pitched sounds, for instance through transmission via bodily fluids or solid objects but not the air, can cause cell damage in biological tissue. The fetus is therefore not exposed to damage from ultrasound apparatus if the pregnant employee does not make direct contact with objects that conduct ultrasound. On the other hand, this often means that the pregnant employee cannot carry out sonication.

Heat

Pregnant employees should avoid extreme heat (>35°C)

Chemical effects

As the first trimester of the pregnancy is the most vulnerable period, the employer should be informed of the pregnancy as early as possible. The employer obviously needs to know about the pregnancy before it is possible to take responsibility for "protecting pregnant employees against hazards which are particularly serious for them".

Use Kemibrug to go through the substances, mixtures and materials that the pregnant employee works with and assess whether the pregnant employee's work routines with these substances and materials should be changed. Also assess whether there are substances, mixtures or materials that the pregnant employee may not work with and whether this work can be carried out without risk to the pregnant employee or fetus. In this respect, particular attention must be paid to work with agents labelled with the H and R Statements below.

The H Statements are found on all new chemicals labelled according to CLP regulations. It is still possible to find chemicals labelled under the old regulations with R Statements, and it is therefore necessary to be aware of both types of labelling.

Each department/group can extract a list from Kemibrug of substances that require a special risk assessment in relation to pregnancy (see below). Ask the health and safety representative.

In relation to AT Guideline A.1.8. Pregnant and breastfeeding employees' work environment

<https://arbejdstilsynet.dk/da/regler/at-vejledninger/g/a-1-8-gravides-og-ammendes-arbejdsmiljoe>

<http://arbejdstilsynet.dk/da/regler/bekendtgorelser/a/sam-arbejdets-udforelse-559/bilag-2-gravide-og-ammende.aspx>

The employer should make an assessment of the risk to the pregnant employee and the fetus when the pregnant employee works with or is exposed to substances and materials with the following risk statements on the label:

- R39: Danger of very serious irreversible effects
- R40: Limited evidence of a carcinogenic effect
- R45: May cause cancer
- R46: May cause inheritable genetic damage
- R48: Danger of serious damage to health by prolonged exposure
- R49: May cause cancer if inhaled

- R60: May impair fertility
- R61: May cause harm to the unborn child
- R62: Possible risk of impaired fertility
- R63: Possible risk of harm to the unborn child
- R64: May cause harm to breast-fed babies
- R68: Possible risk of irreversible effects

- H340: May cause genetic defects.
- H341: Suspected of causing genetic defects
- H350: May cause cancer
- H350i: May cause cancer if inhaled
- H351: Suspected of causing cancer
- H360: May damage fertility or the unborn child
- H361: Suspected of damaging fertility or the unborn child
- H362: May cause harm to breast-fed children
- H370: Causes damage to organs
- H371: May cause damage to organs

Special attention should also be paid to substances, mixtures or materials in the pregnant employee's work environment that demonstrably lead to hazardous absorption through the skin. This applies to the following R and H Statements:

- R21: Harmful in contact with skin.
- R24: Toxic in contact with skin.
- R27: Very toxic in contact with skin.
- R39/24: Toxic, danger of very serious irreversible effects in contact with skin.
- R39/27: Very toxic, danger of very serious irreversible effects in contact with skin.
- R48/21: Dangerous, serious damage to health by prolonged exposure in contact with skin.
- R48/24: Toxic, serious damage to health by prolonged exposure in contact with skin.
- R68/21: Dangerous, possible risk of irreversible effects in contact with skin.

- H310: Fatal in contact with skin.
- H311: Toxic in contact with skin.
- H312: Harmful in contact with skin.
- H370: Causes damage to organs through prolonged or repeated exposure.
- H371: May cause damage to organs.
- H372: Causes damage to organs damage through prolonged or repeated exposure.
- H373: May cause damage to organs through prolonged or repeated exposure.

Working with the above substances in powder form and working with liquid substances should be avoided. Substances and materials labelled with other R and H Statements can also have effects which the fetus' cells can be sensitive to. Therefore, a concrete assessment should also be carried out when a pregnant employee works with or is exposed to the following substances and materials:

- Hormone disruptors.
- Chemicals/agents covered by the Executive Order (Danish Working Environment Authority's Executive Order No. 908 on Measures to Protect Workers from the Risks related to Exposure to Carcinogenic Substances and Materials at Work).
- Liquid substances and organic solutions.
- Pesticides.
- Heavy metals.
- Anaesthetic gases.
- Asphyxiant gases.

Always read the workplace instructions for use for each substance worked with!

General safety regulations should be adhered to, and the amount and concentrations of the substance worked with as well as duration of the work should be taken into account.

Dangerous substances should as far as possible be substituted with other less dangerous substances. The risk factor can be reduced considerably by encapsulation of the substance or the process, using local extraction, fume cupboard or by using personal protective equipment. Other options include purchasing pre-weighed amounts, ready-mixed solutions, kits or granules instead of powders.

Regulations for pregnant employees working with radioactivity

Before starting work with open radioactive sources, all employees should be given a thorough introduction to the work - and written procedures should be issued for perusal. Women of reproductive age should receive information from the daily leader/supervisor that special regulations apply during pregnancy. The pregnant employee should be made familiar with the Danish Health Authority's pamphlet "Guidelines on Radiation Protection during Work with Open Radioactive Sources", the Danish National Institute of Radiation Protection, 2005, (http://www.sst.dk/publ/Publ2005/SIS/Vejl_aabne_kilder/Vejl_aabne_kilder.pdf).

Pregnant employees should inform their employer of the pregnancy as soon as possible. Following notification of the pregnancy, the responsible daily leader and the pregnant employee should assess the size of radiation dose to the unborn child during the pregnancy. In the event of doubt, the prepared written workplace assessment, APV, can be presented to the Danish National Institute of Radiation Protection for final assessment.

The pregnant employee's work should be arranged so that there is no risk that the unborn child receives a dose over 1 mSv. The risk of radiation resulting from unintentional incidents/accidents should also be taken into account.

- If the dose with certainty can be assessed as being less than 1 mSv: the pregnant employee can continue with previous work tasks without special measures being taken to reduce exposure to radiation and to monitor this.
- If the dose is assumed to be less than 1 mSv: the pregnant employee can continue with the previous work tasks, possibly supplemented by taking special measures to reduce the possibility of exposure to radiation. The radiation dosis should be monitored using a period of measurement of no more than 1 month.
- If the dose is assumed to be higher than 1 mSv: the pregnant employee must be moved to other work tasks with less likelihood of exposure to radiation, if necessary supplemented with monitoring the radiation dosis using a measurement period of no more than 1 month, or the pregnant employee must be moved to other work that does not involve exposure to ionizing radiation.

Pregnant employees may not carry out iodination with I-125.

Pregnant employees may not regularly make extractions from radioactive stock solutions.

Executive Order 823/1997

<https://www.retsinformation.dk/forms/R0710.aspx?id=178970> about dose restrictions for ionizing radiation provides a more thorough review of the thinking behind radiation protection of the unborn child.

Personal dosimeter:

If the pregnant employee continues with work tasks involving personal dosimeters according to Executive Order No. 823/1997 the measurement period for these should be 1 month.

Breastfeeding:

If a pregnant employee is breastfeeding during a period when she is working with radioactive substances, this should be taken into consideration. However, if she is working with activity levels/amounts less than the limits specified in a S1 license, there is usually no reason for the woman to be moved to other work.

Biological effects

The relevant regulations for laboratory classification should always be followed, and thorough instruction should be given by the person responsible for giving instructions (supervisor/daily leader) before the work begins.

Avoid working with laboratory animals

Laboratory animals can be hazardous for the fetus:

Laboratory animals can carry a protozoan parasite, toxoplasma gondii, which can cause toxoplasmosis in humans ('hare disease' in Danish). It is recommended that the pregnant employee's doctor takes a blood test to determine the presence of antibodies against toxoplasmosis. Animals can also be tested. If antibodies are present, work can be continued as before, but if no antibodies are detected, the pregnant employee should be moved to other work.

Avoid working with poultry/birds

In addition, the pregnant employee should not work with birds/poultry due to the danger of ornithosis (parrot disease).

Both toxoplasmosis and ornithosis can cause birth defects.

Avoid working with biological agents that are particularly hazardous for pregnant women

E.g. Listeria can cause encephalitis

Patient samples

Be vigilant when working with blood and tissue samples; all patient samples are considered to be potentially infectious and should be treated accordingly. A vaccination against contagious hepatitis before undertaking the work/before a potential pregnancy is recommended. If you are already pregnant, avoid working with blood and tissue samples.

If you would like to know more about the subject, you can read the "Executive Order on Working with Biological Agents and the Work Environment" from the Danish Working Environment Authority (<http://arbejdstilsynet.dk/da/regler/bekendtgorelser/b/biologiske-agenser-57.aspx>)

References

Danish Working Environment Authority (www.at.dk)

Danish Working Environment Authority's guidelines for pregnant workers and workers who are breastfeeding <https://arbejdstilsynet.dk/da/regler/at-vejledninger/g/a-1-8-gravides-og-ammendes-arbejdsmiljoe>

National Institute of Occupational Health's online information system www.armoni.dk

Executive Order 823/1997 on dose restrictions for ionizing radiation
<https://www.retsinformation.dk/forms/R0710.aspx?id=178970>

Industrial Work Environment Council (<http://www.i-bar.dk/>)

SDU's database for registration of chemicals, Kemibrug (www.kemibrug.dk)

The Danish Health Authority's guidelines for radiation protection when working with open radioactive sources 2005
(http://www.sst.dk/publ/Publ2005/SIS/Vejl_aabne_kilder/Vejl_aabne_kilder.pdf)