Safety and hygiene regulations

Pregnancy and breastfeeding

Pregnancy and breastfeeding are biological states that require **special protection**

During the entire process of gestation and breastfeeding, physiological, metabolic and psychological changes take place in the woman's body. As a result, work conditions that were considered normal and hazard-free may no longer be defined as such, because they could affect the health of the mother or that of the fetus.

To recognise a situation of pregnancy or breastfeeding and request the adoption of appropriate measures, **the organisation needs to be informed of the worker's state.**

Why inform the organisation:

To implement the **Procedure to protect women who are pregnant or breastfeeding against occupational hazards**:

- Receive information about occupational hazards that could affect pregnancy, breastfeeding or the fetus.
- Receive an assessment of your work conditions in relation to pregnancy or breastfeeding.
- Adapt or implement any required preventative measures.

How to communicate a pregnancy:

1. **Request a doctor's appointment** using the tool for requesting healthcare on the prevention website:
   - Pregnancy: http://www.upc.edu/prevencio/ca/salutupc/vigilancia-salut/tipus-revisio-visita-medica/visita-medica-embaras
   - Breastfeeding: http://www.upc.edu/prevencio/ca/salutupc/vigilancia-salut/tipus-revisio-visita-medica/visita-medica-lactancia
2. **Fill in the *Notification of pregnancy* / *Notification of breastfeeding* document**, which is available at the above links, and submit it to the Health Monitoring and Promotion Centre at the time of the appointment.

Procedure to protect women who are pregnant or breastfeeding against occupational hazards

Pregnancy and breastfeeding

Main **occupational hazards** that could affect the health of pregnant / breastfeeding workers or the fetus

A non-exhaustive list of agents to which pregnant or breastfeeding (*) workers **must not be exposed**:

- **Reprotoxic chemical agents**
- **Certain biological agents from Group 2** (*Toxoplasma*, Rubella Virus, etc.)
- **Work in high-pressure atmospheres**
- **Ionising radiation (X-rays, alpha, beta and gamma isotopes)**

A non-exhaustive list of agents and work conditions that **could have a negative impact on the health** of pregnant or breastfeeding workers and/or on the fetus (*):

- **Chemical agents (mutagens, carcinogens and reprotoxic substances)**
- **Biological agents in groups 2, 3 and 4**
- **Physical agents:**
  - **Extreme cold or heat**
  - **Knocks or strong vibrations**
  - **Excessive noise (above 80 dBA)**
  - **Non-ionising radiation**
  - Manual handling of heavy loads that represent risks, particular back injury
  - Awkward movements and postures

EXPOSURE TO HYGIENE RISKS

(*) *Royal Decree 298/2009*, *of 6 March, on the application of measures to promote better health and safety at work for pregnant, postpartum or breastfeeding women.*

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4 Biological agents
5 Physical agents

Exposure to chemical agents entails presence of the agent and contact with it

Before you handle any chemical agent, you must **identify the R- or H-phrases** assigned on its label and check whether these could have a **negative effect** on the health of a pregnant worker, embryo, fetus or breast-fed infant:

R-phrases		H[1]-phrases	
R40	Limited evidence of a carcinogenic effect	**H351**	Suspected of causing cancer
R45	May cause cancer	**H350**	May cause cancer
R46	May cause inheritable genetic damage	**H340**	May cause genetic defects
R49	May cause cancer by inhalation	**H350i**	May cause cancer by inhalation
R60	May impair fertility	**H360F**	May impair fertility
R61	May cause harm to the unborn child	**H360D**	Suspected of causing harm to the unborn child
R62	Possible risk of impaired fertility	**H361f**	Suspected of impairing fertility
R63	Possible risk of harm to the unborn child	**H361d**	Suspected of damaging the unborn child
R64	May cause harm to breast-fed babies	**H362**	May cause harm to breast-fed children
R68	Possible risk of irreversible effects	**H341**	Suspected of causing genetic defects

Other chemical agents with negative effects:

- **Endocrine disrupters:** substances and preparations that could disrupt the function of the male or female endocrine system: e.g. *styrene.*
- **Neurotoxins:** substances and preparations that could affect the nervous system, for example: *polychlorinated biphenyl (PCB)* and *toluene*.
- **Agents with the phrase R33 or H373**: danger of cumulative effects.
- Agents that, due to **liposolubility, pH or molecular weight**, may be excreted in breast milk: e.g.lead and its derivatives (lead sulphate, etc.).

[1] Some *H phrases are combinations, such as: H360Fd "May impair fertility, etc." Further information on the prevention website:* http://www.upc.edu/prevencio/ca/seguretat-higiene/productes-quimics/etiquetatge-de-productes-quimics/frases-h

Pregnancy and breastfeeding

Preventative measures should be adopted to eliminate or reduce exposure to a chemical agent

Preventative measures

- **Do not work with chemical products labelled with the phrases H360F (R60), H360D (R61), H361d (R63), H360FD, H360Fd, H360Df if you are pregnant and H362 (R64) if you are breastfeeding**.
- Adapt the workplace, **eliminate processes** in which there are chemical agents that may be harmful to the pregnant worker, the embryo, fetus or breast-fed infant.
- Use **chemical products** that do not have **negative effects** on the health of the pregnant worker, embryo, fetus or breast-fed infant.
- **Handle** all **hazardous chemical products within a fume cupboard**.
- **Use suitable personal protection equipment**, including at least safety goggles and protective gloves.
- **Use a lab coat**.

Store dangerous chemical products suitably in safety cabinets, etc.

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Identify and classify biologically agents before handling them

Biological agents

Group 2: can cause disease in humans or animals, but is unlikely to spread to the community. Prophylaxis is effective.
(For example: *E.coli*, *Candida albicans* and *Toxoplasma gondii*)

→ **Containment level* 2**

Group 3: can cause severe disease in humans and/or animals with a risk of spreading to the community. Prophylaxis is effective.
(For example: *Brucella abortus* and *human immunodeficiency virus [HIV]*)

→ **Containment level 3**

Group 4: can cause very severe disease in humans and/or animals with high likelihood of spreading to the community. No effective prophylaxis. (For example: *Ebola virus)*

→ **Containment level 4**

If you handle biological agents in group 3 or 4, **notify the SPRL**
servei.prevencio@upc.edu

* ***Containment level*** *means* ***level of biological safety****. The term containment is used to describe safe working methods. The aim of containment is to reduce or eliminate the exposure of workers, other people and the external environment to potentially hazardous agents.*

Safety and hygiene regulations

Pregnancy and breastfeeding

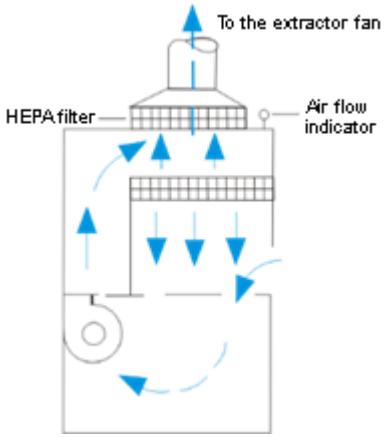
Safety measures for CONTAINMENT LEVEL 2

Safety measures

- **Do not work with the following biological agents from Group 2:**

•***Toxoplasma gondii***	• ***Campylobacter fetus***	• ***Cytomegalovirus***	• ***Coccidioides immitis***
• **Rubella virus**	• ***Treponema pallidum***	• ***Herpes simplex virus***	

- **Restrict access to authorised staff**.
- **Ensure that test or work bench surfaces** are impermeable to water, easy to clean and resistant to acids, alkalis, solvents and disinfectants.
- **Use a biological safety cabinet**.
- **Use personal protection equipment,** including at least safety goggles and protective gloves.
- **Use a lab coat**.
- **Use incinerators** to destroy dead animals, etc.
- **Control disease vectors**, such as rodents and insects.
- Ideally, equip containment level 2 areas **with an observation window** or an alternative device so that the occupants can be seen.

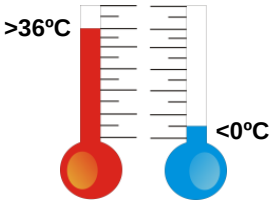


Biological safety cabinet

Pregnancy and breastfeeding

Physical agents that could have a negative impact on a pregnant worker and/or the fetus and during breastfeeding

Extreme temperatures: avoid exposure to T >36ºC or T <0ºC



Preventative measures :

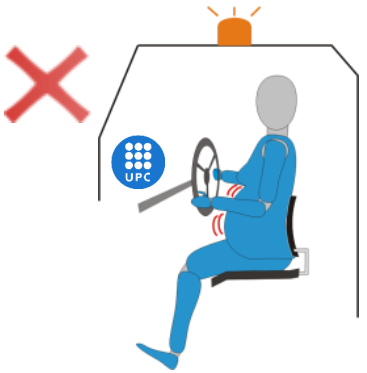
- Limit the time you remain in areas at these temperature, reduce it to zero.
- If you are occasionally exposed to extreme temperatures (28-36ºC or 0-10ºC), depending on the situation, you should:
  - Drink water, cut down on food or drink warm liquids
  - Use suitable work clothing

Vibrations: do not carry out any work that exposes you to vibrations of the entire body and/or vibrations through the hands and arms.

Preventative measures:

- Do not drive transport vehicles, tractors or other motor-driven machinery, such as a fork-lift truck.
- Do not use compacting machines, due to the vibrations, or large portable tools (drills, pneumatic hammers, etc.).

Knocks: try to avoid knocks, particularly to the abdomen.



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5 Physical agents (2/3)

Use of ear protectors does not protect the fetus

Work should not be carried out when the **sound pressure level** **is above 80 dB(A)**, particularly **after weeks 20-22** of pregnancy.

Sound pressure level dB(A)	Situations	Sensation
130	Siren of an ocean liner Fireworks	Produces a sensation of pain
110	Motorbike with no muffler Pneumatic hammer	Unbearable sensation and need to leave the environment
100	Discotheque Car horn (at 10 m)	
90	Printing press Automatic carwash	Annoying sensation
80	Noisy street Assembly line	
70	Conversational speech Office	Uncomfortable background noise for conversation
60	Restaurant Interior of a car	
50	Office (background noise) Classroom (background noise)	Agreeable background noise for social life
40	Library Sitting room (background noise)	
30	Bedroom Fridge (at 1 m)	Background level required to rest
20	Broadcasting studio Sound of a mosquito (at 2 m)	
10	Acoustic laboratory Sound of breathing	Disturbing silence
0	Threshold of human hearing	

Preventative measures

- **Avoid exposure** of pregnant workers by organising tasks, etc.
- **Indicate** work areas where the sound pressure level is above 80 dB(A) and restrict access to pregnant workers.

Other physical agents: work in high-pressure atmospheres

Preventative measures

- **During pregnancy, workers should not carry out tasks in high-pressure atmospheres.**

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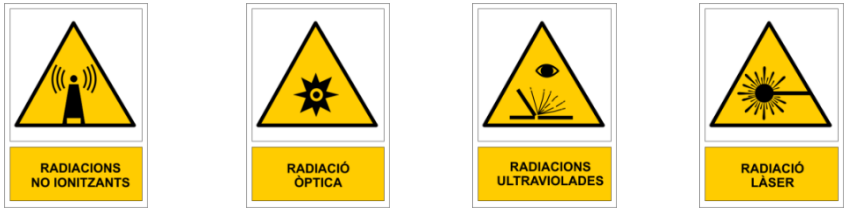
5 Physical agents (3/3)

Non-ionising radiation may have a negative impact on a pregnant worker and/or the fetus
Pregnant women must not be exposed to ionising radiation

Non-ionising radiation: If you work in places where there is a considerable amount of equipment such as server racks, electrical cables for the building, etc.

Communicate your situation by making a doctor's appointment and filling in the pregnancy notification form or the breastfeeding notification form.

Types of non-ionising radiation
Static electromagnetic fields (static EMF)
Extremely low frequency (ELF) (frequency of 0 to 30 KHz)
Radiofrequency (RF) (frequency of 30 KHz to 300 MHz)
Microwaves (MW) (frequency of 300 MHz to 300 GHz)
Optical radiation. Infrared (IR) (frequency of 300 GHz to 385 THz)
Optical radiation. Visible (Vis) (frequency of 385 THz to 750 THz)
Optical radiation. Ultraviolet (UV) (frequency of 750 THz to 30 PHz)
Lasers (a concentrated, directed form of radiation, normally of IR, Vis or UV radiation)



Preventative measures

- **Avoid exposure**, change the process, vary tasks, etc.
- **Keep as far as possible** from the source of emission.
- **Reduce exposure time**.

Ionising radiation: if you work in workplaces that are exposed.

Communicate your situation by making a doctor's appointment and filling in the pregnancy notification form or the breastfeeding notification form.