

Occupational Health at EPFL

- ❖ Who are we?
- ❖ Where are we?
- ❖ Objectives
- ❖ Skills
- ❖ Expertise available to the EPFL community
- ❖ Expertise available to EPFL individuals
- ❖ Medical forms
- ❖ Community health
- ❖ COSEC: interactions with the service PS-Santé

Who are we?

- Occupational physicians and medical assistants
- Occupational hygienists
- Nurses from the Point Santé



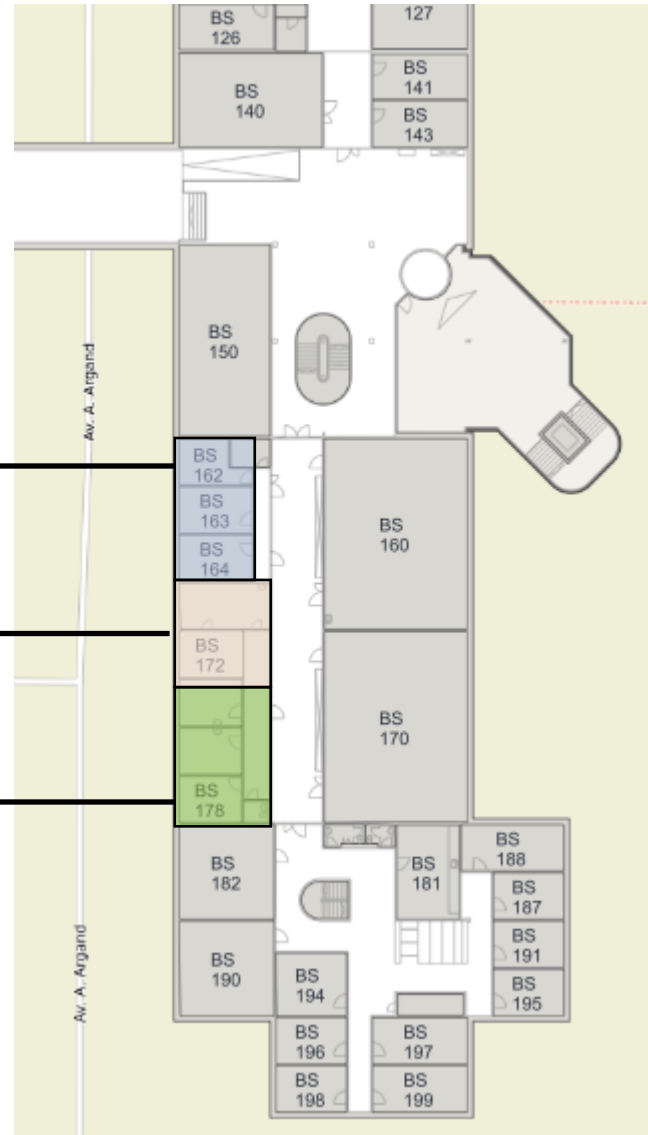
Where are we?

Occupational Hygiene
Appointment
hygienetravail@epfl.ch

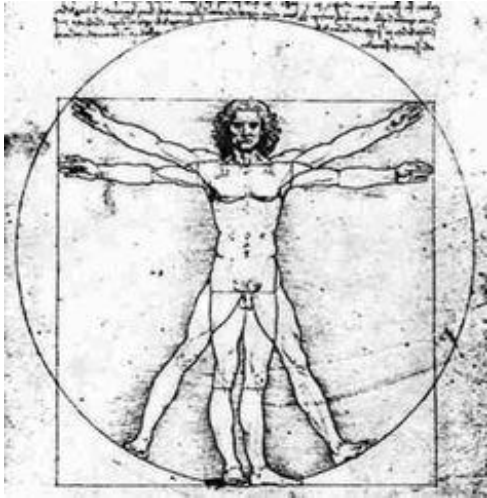
Occupational Health
Appointment
sante@epfl.ch
 Call 3 2007

Point Santé
Opening Hours
 8.30 - 11.30 and 12.30- 17.00





Objectives



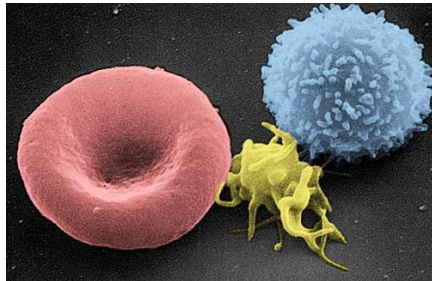
- ❖ Ensure an optimal physical, mental and social **well-being at work**
- ❖ Protect **children** from indirect harmful effects
- ❖ Ensure **retirement** without any handicap due to the professional activity

OLT 3 (Art. 2): The health protection measures that the authorities require from the employer need to be commensurate with the implications in building design and business organization.

OCCUPATIONAL MEDICINE
EFFECTS



Jmarchn*

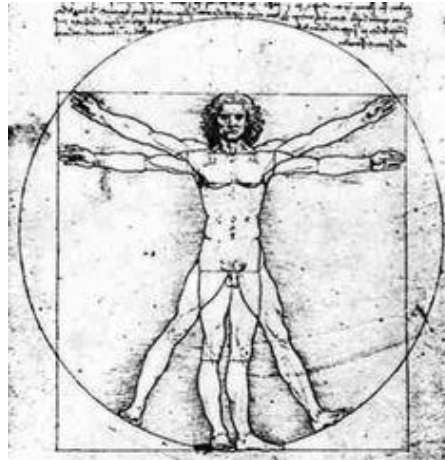


NCI-Frederick†

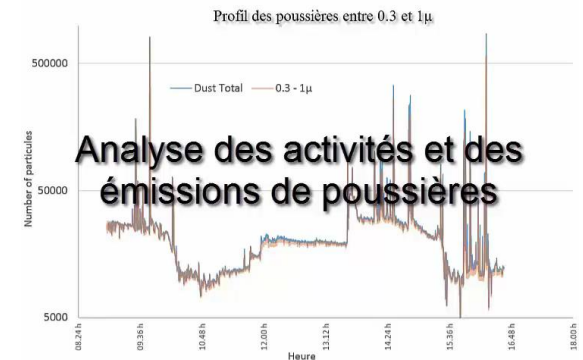
- Investigation of individual situations (anamnesis)
- Preventive medical exams and monitoring: biological (TB), chemical (Pb, As, Hg, nano-particles), physical agents (noise, radiation)

Skills

are these symptoms possibly due to a professional exposure?



OCCUPATIONAL HYGIENE
CAUSES/ENVIRONMENT



*Par Jmarchn — Travail personnel, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=26590234>

† Par Electron Microscopy Facility at The National Cancer Institute at Frederick (NCI-Frederick) — [1], Domaine public, <https://commons.wikimedia.org/w/index.php?curid=407197>

Expertise available to the EPFL community

EXPOSURE ASSESSMENT AND PROTECTION MEASURES



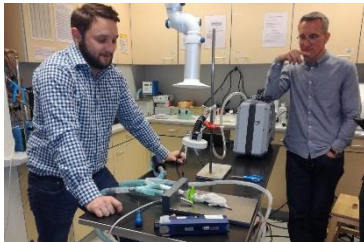
Emergency response group

Is there contamination after a particular **incident**?



Safety Engineers

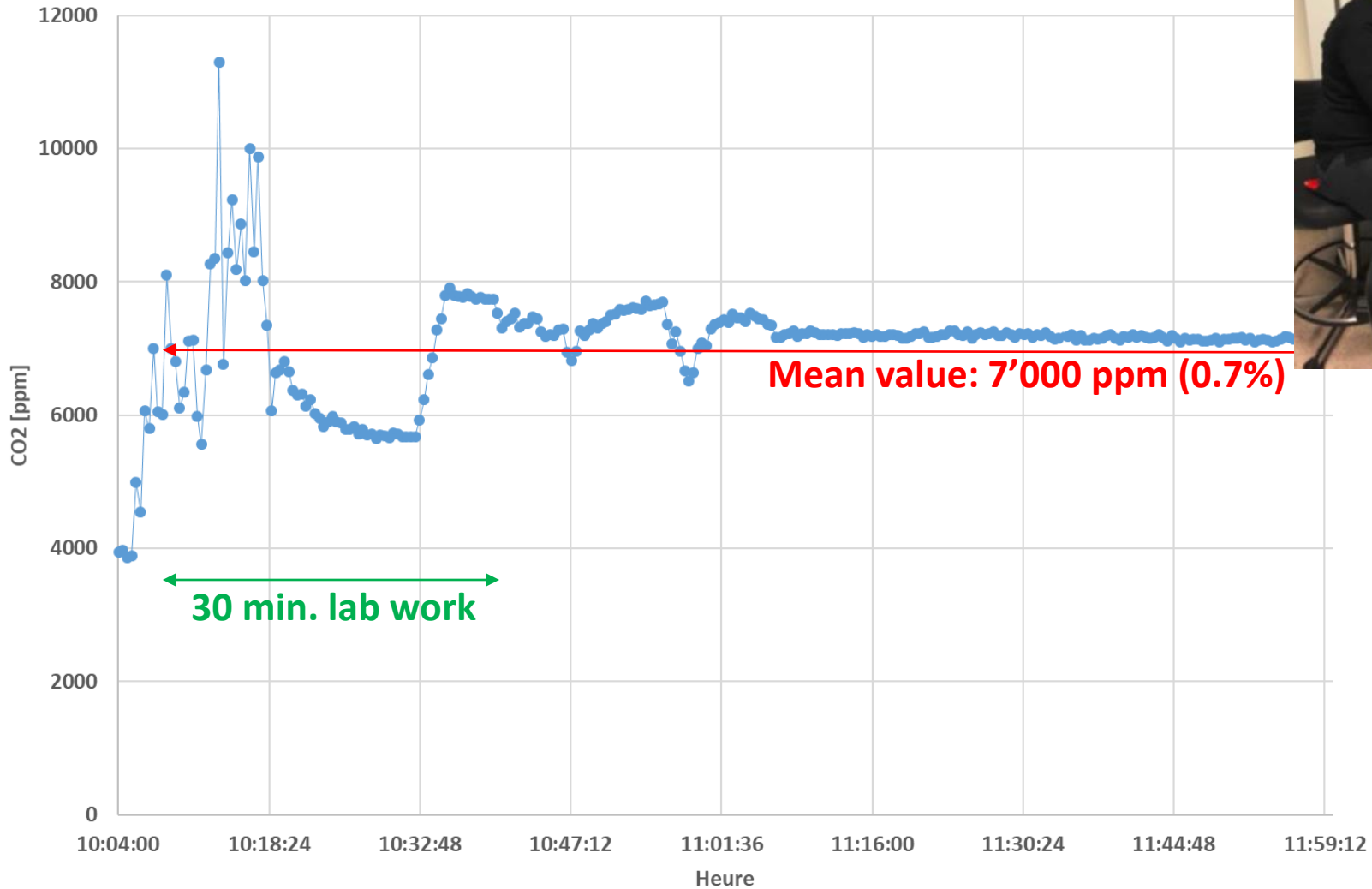
Are **technical measures** in place appropriate?



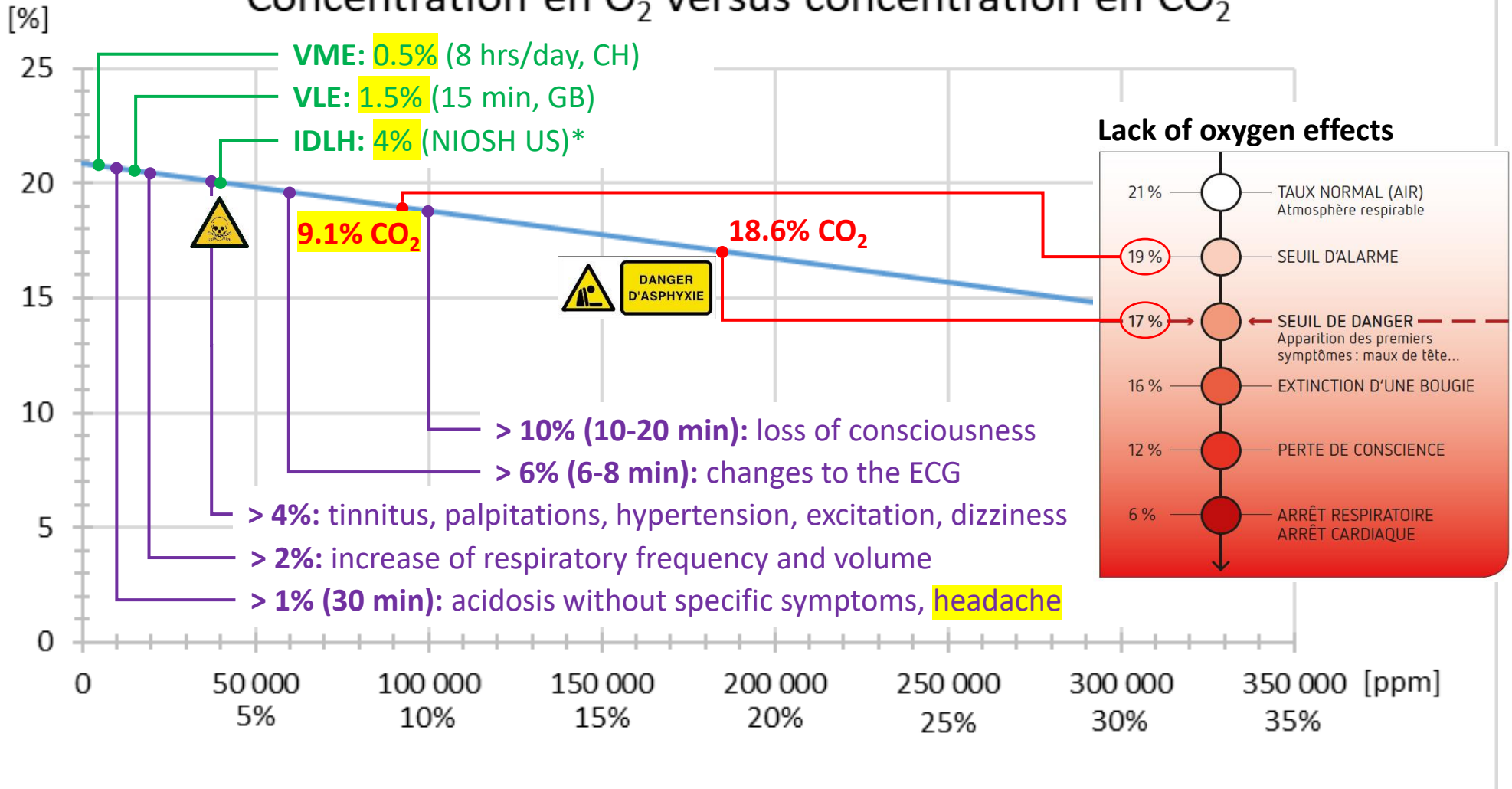
Research groups

How can we improve the **operating procedures**?

Use of CO₂ as anesthetic gas

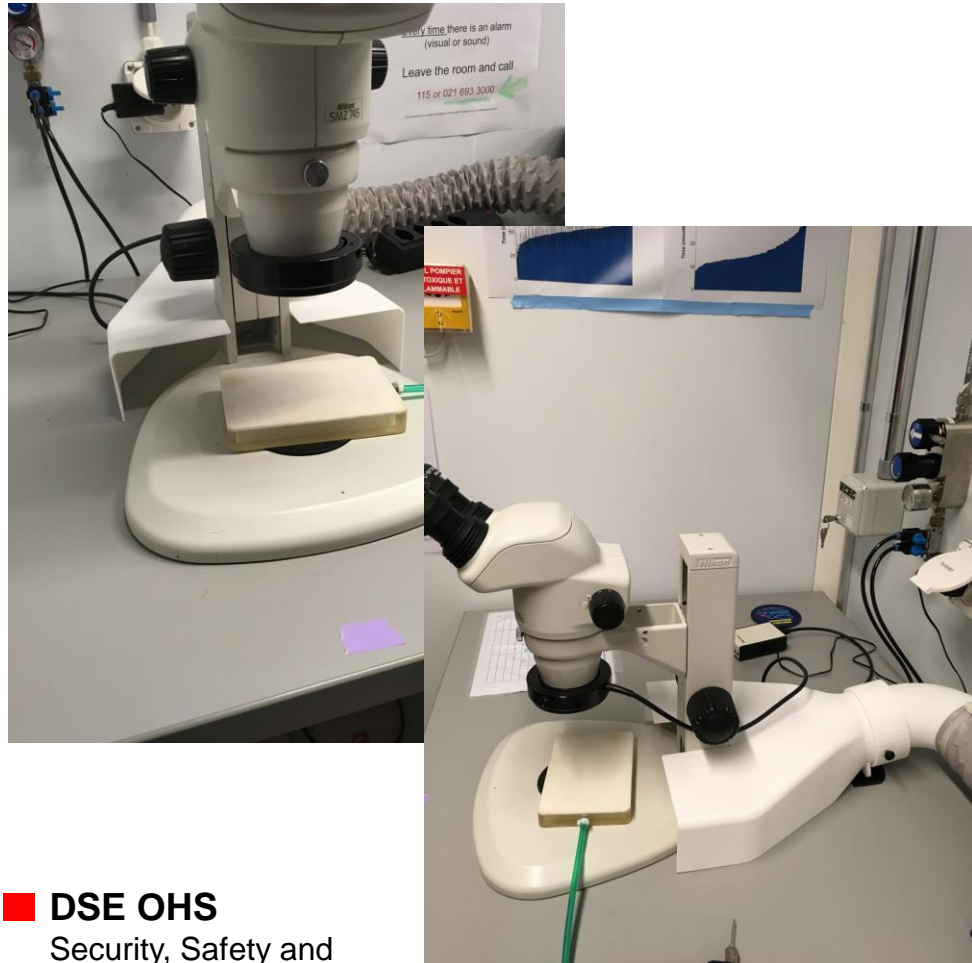


Concentration en O₂ versus concentration en CO₂



Use of CO₂ as anesthetic gas

Model 5 (2 points of extraction: microscope + floor, 75 + 25 m³/h)

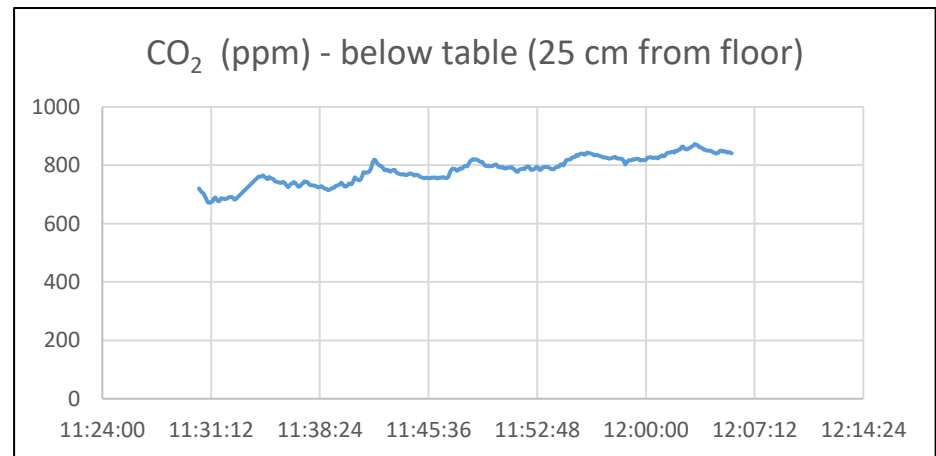


Good hygiene (easy cleaning)

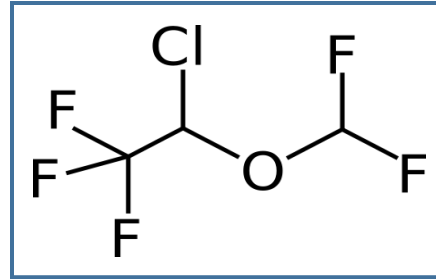
Good efficacy – CO₂

- Nose: < 900 ppm
- Table (sides of microscope): < 800 ppm
- Ground: < 900 ppm

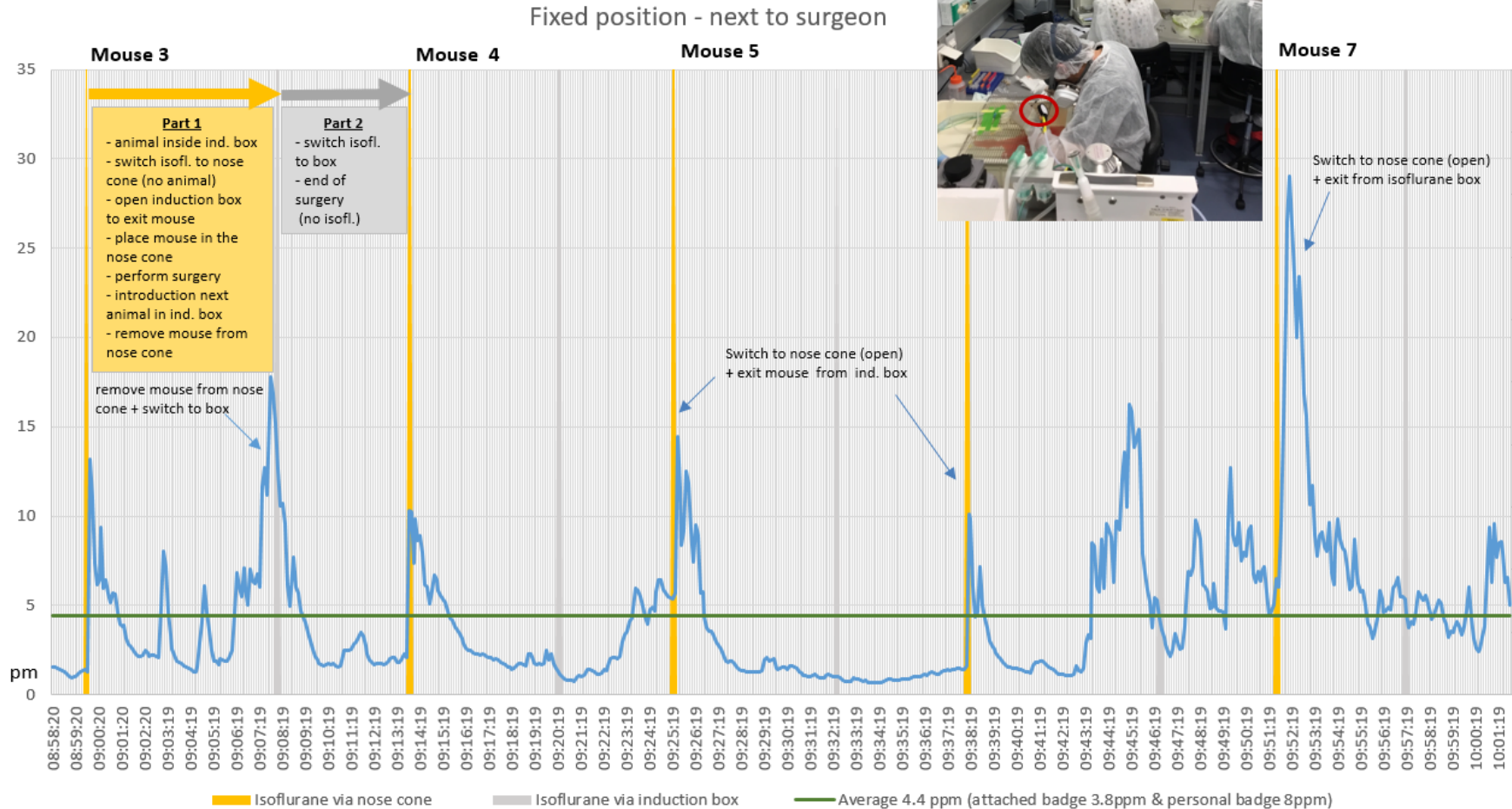
Satisfied users



Use of isoflurane as anesthetic gas



Use of isoflurane as anesthetic gas



Use of isoflurane as anesthetic gas

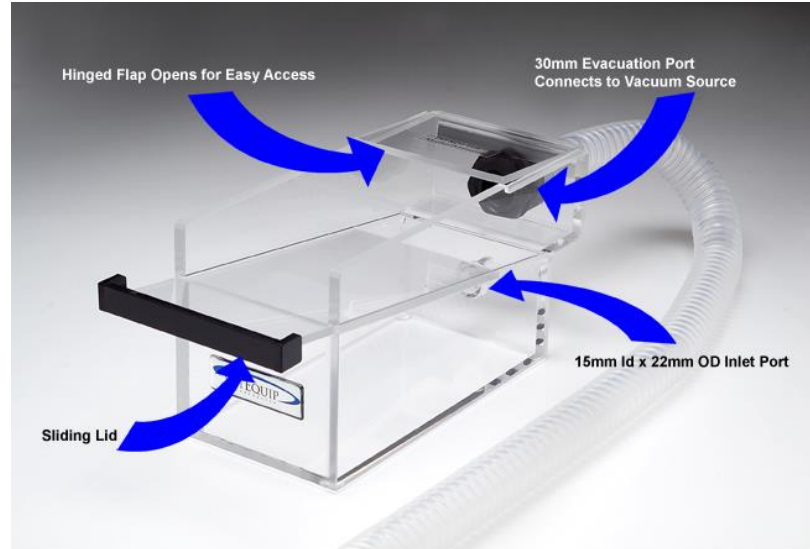


Use of isoflurane as anesthetic gas

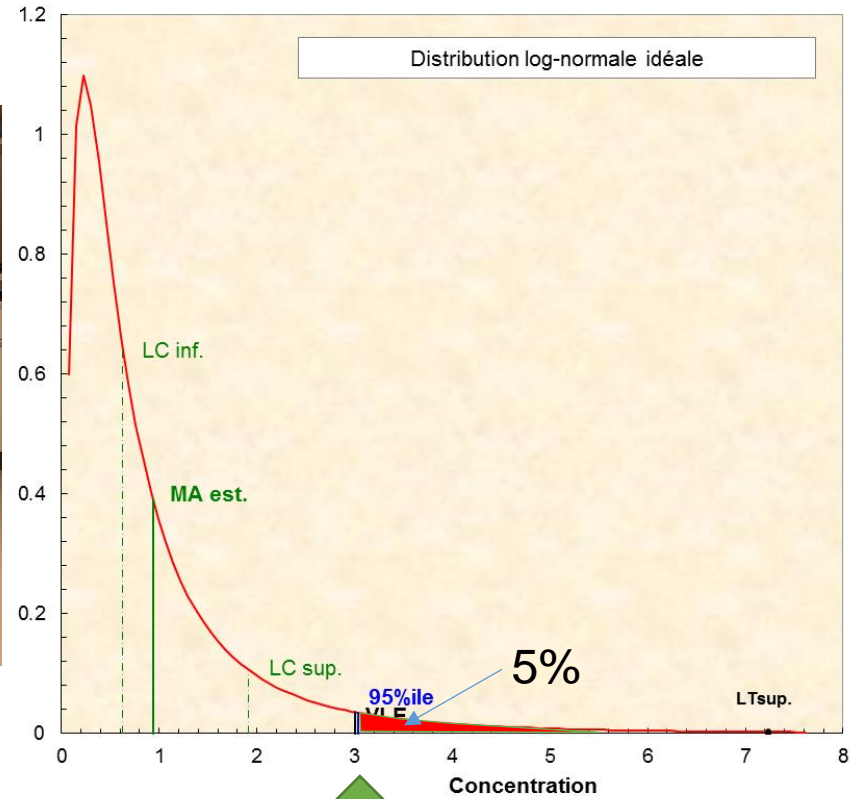
Standard induction boxes



Improved induction boxes



Evaluation of laboratory fume hoods




Safety level (95%ile) = 3 ppm

Evaluation of laboratory fume hoods


Sash opening = standard (50 cm)



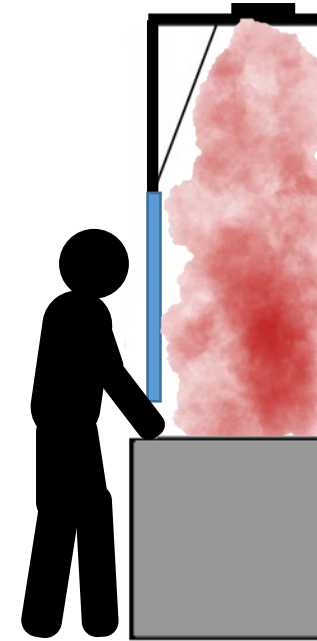
 Butanone (MEK) : VLE : 200 ppm
Isopropanol : VLE : 400 ppm


Sash opening < 40 cm



 Chloroform : VLE : 1 ppm
Formaldehyde : VLE : 0.6 ppm

Sash opening << 40 cm
+ Technical measures



 Cyanogen chloride: No VLE !
Ozone : VLE : 0.1 ppm

Valeur Limite d'Exposition (VLE) = Short-Term Exposure Limit (STEL): acceptable average exposure over a short period of time (15 minutes), as long as the 8hr-time weighted average (VME) is respected

2. I check my fume hood is working prior to using it

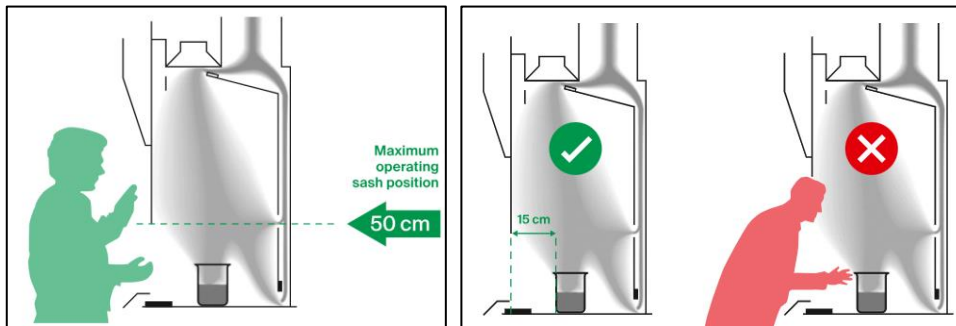
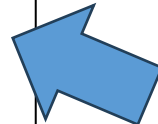
Prior to using a chemical fume hood, always check that it is drawing air

The check is carried out by means of a [pressure indicator \(pressostat\)](#) or by a [light indicator](#)

Discontinue work and close all containers with hazardous chemicals if the alarm sounds. If possible, mute the alarm and put an out-of-order sign on the hood.

If the alarm remains, contact maintenance so that they fix it:

- Lausanne, Sion, Neuchâtel:
[021 693 4000](tel:0216934000) ou [34000](tel:34000) (from a landline)
[Alarm and Engagement center](#)
- Geneva: facility@fcbg.ch



Link: [Laboratory fume hoods – Safety, Prevention and Health - EPFL](#)

Laboratory fume hoods

Fume hoods provide protection from vapours, splashes, and impacts caused by chemicals and their reactions. At EPFL, we control [the level of protection of the fume hoods](#).

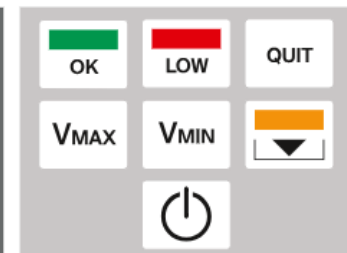
The [linked video](#) illustrates how improperly operated or set-up fume hoods present an additional hazard by creating a false sense of protection. Understanding how they work, and adhering to best practices, is essential to ensuring genuine safety when handling chemicals.

Guidelines and safe work practices

1. What kind of fume hood do I have?
2. I check my fume hood is working prior to using it
3. I close the sash to the maximum possible whenever I work with it
4. I keep a safe distance between myself, the hood, and the setup within the fume hood
5. I keep the fume hood tidy
6. I close the fume hood when I am not using it



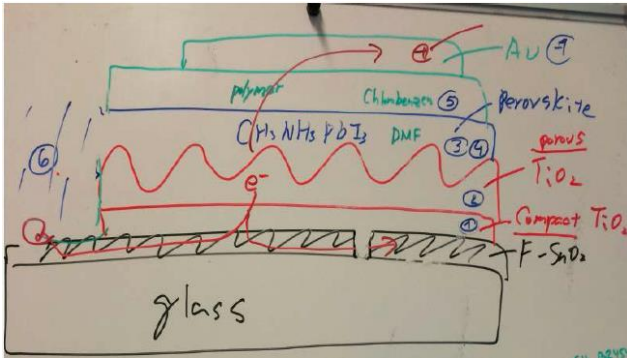
Manual fume hood with timer



Variable air volume fume hoods

Lead exposure risk assessment

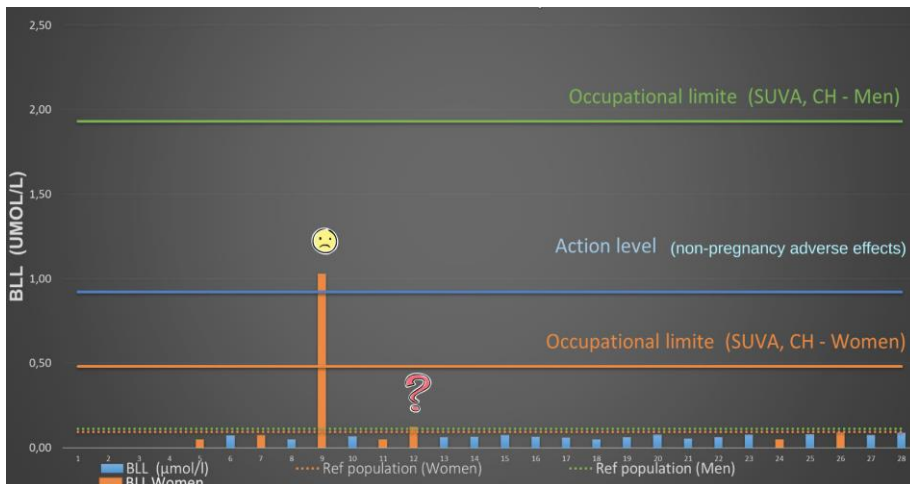
1. Observation of process



2. Occ. Hygiene: analysis of surface contamination



3. Occ. Medicine: biomonitoring – blood lead levels



4. Determine risk level and preventive measures needed

Expertise available to EPFL individuals Maternity/lactation risk assessments

Maternity protection



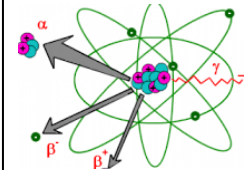
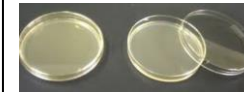
In your workplace, you may be exposed to numerous risks (for instance chemical substances, noise, micro-organisms) that may be harmful to your health or that of your future child. In Switzerland, every employer must comply with a specific legal framework.

To announce your pregnancy or your desire for pregnancy, please fill in the [maternity announcement form](#) and send it to occupational medicine as soon as possible. These formalities are strictly confidential. The earlier the announcement, the better the protection.

DOMAINE SECURITE, PREVENTION ET SANTE (DSPS) EPFL RHO DSPS - PS Téléphone: +4121 693 20 07 Médecine du travail Fax: +4121 693 26 15 BS 172 E-mail: sante@epfl.ch Station 4 Site web: https://securite.epfl.ch CH 1015 Lausanne		
Confidential - Maternity – Employee protection		
General information		
Name & first name: _____		
Birth date: _____		
Unit EPFL: _____	Supervisor: _____	
COSEC: _____		
Is your supervisor informed of your pregnancy? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Gynecologist: _____		
Request		
<input type="checkbox"/> Pregnancy announcement	Due date: _____	
<input type="checkbox"/> Request a risk assessment for a project of pregnancy		
Is this your first pregnancy?		
<input type="checkbox"/> Yes	<input type="checkbox"/> No Date of the previous pregnancy(ies): _____	
Description of your activities (workplace)		

Brief assessment		
<input type="checkbox"/> Office work only		
If not, identify (check), the elements with which you are in contact (in this case the workplace should be evaluated by the Occupational Health).		
<input type="checkbox"/> Hazardous chemical		
<input type="checkbox"/> Microorganism or biological fluids		
<input type="checkbox"/> Ionizing radiations		
<input type="checkbox"/> Moving heavy loads		
<input type="checkbox"/> Cold and heat		
<input type="checkbox"/> Movements and postures causing early fatigue		
<input type="checkbox"/> Noise		
<input type="checkbox"/> Night work		
List of products (chemicals) used in the workplace		

Do you need access to a mother's rest/breastfeeding room?		
<input type="checkbox"/> Yes <input type="checkbox"/> No		
Date and signature: _____		
Please send this form to: Occupational Health, BS 172, station 4 or sante@epfl.ch		
M03/2019-20/03/2019		



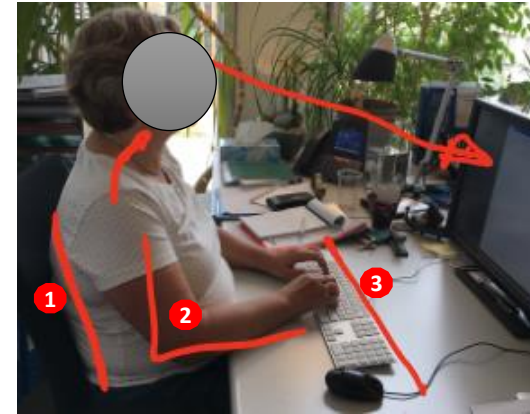
Maternity/lactation risk assessments



Office ergonomic assessments

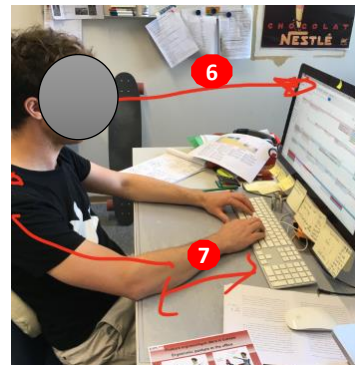
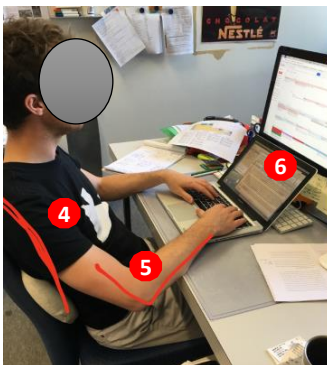


- Adjusted chair settings and lowered its height
- Keyboard closer to body + centered
- Mouse closer to body

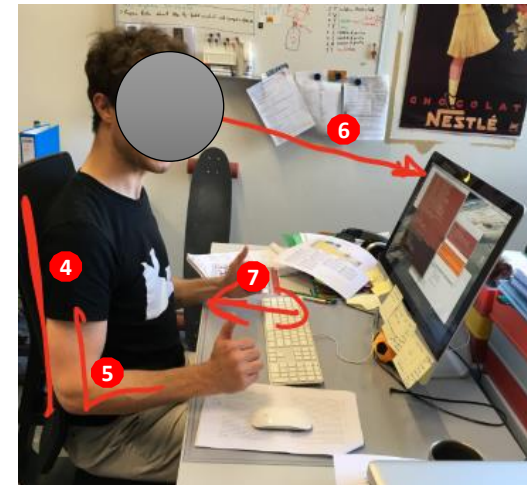


Before

After



- Adjusted chair settings and increased its height
- Removed iPad
- Keyboard closer



Ergonomic assessments of the workplace... and telework

EPFL About Education Research Innovation Schools Campus 50 years Q

Browse > Campus > Health, safety and prevention > Health > Health at work > Ergonomics

Occupational exposure risks

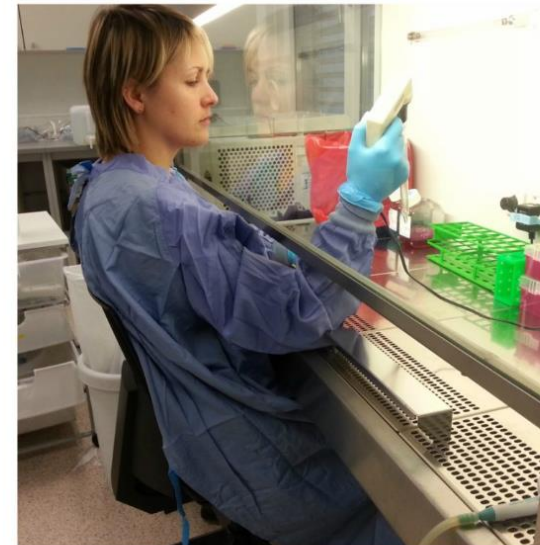
Technical protection equipment

Ergonomics

Maternity protection

Workplace adaptations

Ergonomics



Office ergonomic assessments

1 Chaise
Chair

2/3 Table/repose pied
Table/foot rest

4 Ecran
Screen

5/6/7 Clavier/ Souris/ Documents
Keyboard/ Mouse/ Documents

8 Lumière
Light

9 Changement de posture/exercice régulière
Posture change/ exercise regularly
<http://securite.epfl.ch/videos>

10 ?

Source : brochure SUVA "Travail sur écran. Conseils pour travailler confortablement sur l'ordinateur"

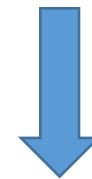
Validation of “Specific” PPE and guidance

17,00CHF
SPECIFIQUE - Casque anti-bruit PELTOR - X1A

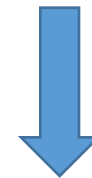
28,50CHF
SPECIFIQUE - Demi-masque réutilisable - Taille L avec sa boîte de protection
Équipements de

11,50CHF
SPECIFIQUE - Filtres anti-gaz et vapeurs ABEK1 - 2 pièces
Équipements de laboratoire, de mesure, d'observation et *Note :* d'essai
EPFL RHO DSPS

Question or purchase for an “**specific**” article via Catalyse from the catalogue “**Articles de Sécurité de l’EPFL**” (respiratory and hearing protection)



Risk assessment by occupational hygienists



Validation of purchase or recommendation of an **alternative** solution

Quantitative Fit-Test



Respiratory protection FFP3
APF = 20; FF Pass level = 200



3M 9332+



3M 8835+

Employees	Overall fit-test value	
Employee 1	145	1535
Employee 2	133	882
Employee 3	368	835
Employee 4	216	1220
Employee 5	45	1131
Employee 6	293	1411
Employee 7	179	1335
Employee 8	70	2019



Medical questionnaires/forms

Depending on the profile of potential exposures, researchers may need to fill out a **questionnaire**:

<https://www.epfl.ch/campus/security-safety/en/health/health-at-work/>



Coronavirus (COVID-19)

Health at work

Occupational exposure risks

Technical protection equipment

Ergonomics

Maternity protection

Workplace adaptations

Nurse consultations

Health promotion and prevention

Health at w



Contact

Contact and office hours of occupational medicine:

Monday, Tuesday, Thursday and Friday from 8.30 am to 4 pm

sante@epfl.ch

Phone: 3 20 07

Contact of occupational hygienists:

hygienetravail@epfl.ch

Formulaires:

[Medical questionnaire and risks of occupational exposure](#)

[Maternity announcement form](#)

[Radiation protection form](#)

- chemical
- biological
- noise, etc.

Community health at EPFL

- Health checkups
- Consultations with nurses and health care
- Orientation within the health care network
- Basic vaccinations
- Emergency contraception



Opening Hours M-F:
8.30-11.30
12.30-17.00

Possibility to fix an appointment online:

<https://www.epfl.ch/campus/security-safety/en/health/nurses-consultations/>



Interaction with our Services

The COSEC:

- ❖ Informs women regarding the risks associated with **pregnancy**
- ❖ Orients questions **regarding ergonomics**
- ❖ Orients cases re: **health issues** in relation to work activities
- ❖ Purchases **specific PPE** via the online store within **Catalyse**
- ❖ Requests assistance from occupational hygienists for questions in relation with the control of **professional exposure**

Thank you for your attention and
for being a COSEC!

I will be glad to answer any questions

