Making women **visible** in occupational health and safety

www.iuf.org

contents

Why we need to integrate gender into occupational health and safety

Trade unions across the world help make workplaces safer and healthier for all workers, women and men, but often women's occupational health and safety is not given enough attention or ignored completely, putting workers at risk of injury and ill-health.

The IUF has decided to issue information on integrating gender into workplace health and safety because many women trade union members have raised concerns that health and safety issues particularly affecting women at work (such as gender-related violence, pregnancy, menstruation and menopause) are not being adequately addressed. Urgent steps need to be taken to address this in the fight to ensure decent work for all.

This resource includes a brief outline of the problem, concerns raised by IUF affiliates, and suggestions on actions that can be taken. There is a briefing on do it yourself research including body and hazard mapping, and a checklist of issues which can be considered to help trade union members integrate gender into occupational health and safety.

Job segregation and false assumptions

Though women now make up 48.5%[1] of the global workforce and 27.6% of the agricultural workforce (rising to 66.5% in low income countries)[2] the labour market remains heavily segregated. Women and men still do different work, and women and men may be exposed to different physical and psychological hazards and risks in the workplace. Job segregation of men and women can lead to false assumptions about who is, and who is not, at risk and can create barriers to employment in certain industries.

The need to avoid stereotyping and recognise difference

Both "gender", which describes those characteristics of women and men that are largely created by societal expectations, and "sex", which encompasses characteristics that are biologically determined, affect workers' health and safety in many ways. In spite of increasing awareness, campaigning by trade unions, and slowly improving research, these differences are still too often ignored, misunderstood or stigmatised, leading to failures in preventing women's occupational ill-health and injuries.

Exposure to the same risks may impact on women and men differently. Work predominantly undertaken by women is often wrongly presumed to be lighter, easier and safer than that undertaken by men and consequently receives less attention. While men may suffer more accidents and fatalities at work, the reality is that women often work in physically hard and often repetitive jobs such as in agriculture, cleaning, hotel work, social care, domestic work and food manufacturing.

Double jeopardy faced by women

Women carry out most of the (unpaid) work in the home: caring for children and adult relatives, cleaning, cooking, fetching water and fuel. Information from UN Women shows that women carry out at least two and a half times more unpaid household and care work than men.[3] Not forgetting that women are doing paid work as well and are more often working part-time. As stated by the Women Brain Project, the stress generated by caregivers' responsibilities increases risk for various mental health disorders and stress-related diseases. Women are more likely to be diagnosed with or suffer from, for instance, Alzheimer's disease, meningiomas (brain tumours), or multiple sclerosis, than men.[4]

A report from the UK **Living longer: caring in later working life[5]** (March 2019) gives another perspective on older women workers.

As the UK population gets older, an increasing number of workers are providing care towards the end of their working life for family members. One in four older female workers, and one in eight older male workers, have caring responsibilities.

There is still a societal expectation for women, rather than men, to take on caregiving roles. Most of the care that men provide is to their spouse or parents, whereas women are more likely to provide care to a broader range of people including non-relatives.

Information from UN Women shows that women carry out at least two and a half times more unpaid household and care work than men.

This so called "double burden" of physical and stressful work takes its toll on women's health as well as limiting their leisure time and capacity to do paid work. So women's work is not light work!

Less research on occupational health and safety and less protection for women workers

Occupational health and safety (OHS) research has tended to focus only on men even though women may work in the same job.

> **Preventing exposure to chemicals – more women-based research needed**
>
> A recent review of evidence[6] on the causal link between exposure to persistent organic pollutants (POPs) and other chemicals such as **pesticides** and women's health disorders found that studies had largely focused on men or on male rodents. It identified the need for research on women workers working in **manufacturing plants and as pesticide applicators**.

Though occupational exposure limits (OELs) should not be considered a hard and fast line between safe and unsafe they are supposed to protect all workers. But they are generally based on studies of men and on laboratory tests. Even medical research, the results of which may be applied to women, is invariably performed on male subjects such as laboratory-bred mice! But the journalist Caroline Criado Perez points out, "men and women have different immune systems and different hormones, which can play a role in how chemicals are absorbed. Women tend to be smaller than men and have thinner skin, both of which can lower the level of toxins they can be safely exposed to. The lower tolerance threshold is compounded by women's higher percentage of body fat, in which some chemicals can accumulate."[7]

Hormonal influences (menstruation, menopause, lactation) can also modify the reaction to chemical exposure. For instance "epidemiologic studies have shown that sensitivity to asthmatic attacks increases in the premenstrual phase and airway reactivity to allergens and irritants varies over time and with hormones. These differences could make women more susceptible than men to occupational asthma and indicate the need for additional prevention measures during the premenstrual phase (e.g. particular protective personal equipment [PPE])."[8]

> **The ILO says**
>
> *Concerns have been expressed over the different effects of exposure to hazardous substances and biological agents on reproductive health, the physical demands of heavy work, the ergonomic design of workplaces and the length of the working day, especially when domestic duties also have to be taken into account. At present, there is a shortage of information about the different gender-related risks of exposure to certain chemicals, to genetic materials cultivated and harvested in transgenic laboratories, and to pharmaceuticals with new genetic properties, all of which may have different long-term health effects on women and men. Possible occupational causes are as yet unexplored and research is needed to assess the links between occupational exposures and their outcomes, in order to make available adequate guidance.[9]*
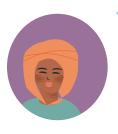
Moreover, job segregation can seriously impact women's health and safety. For instance, women working on some banana plantations are not permitted by some employers to carry out the task of spraying the crop with pesticide on safety grounds; but so called "safer" job tasks carried out only by women in the same workplace include washing by hand the contaminated work clothing worn by the male pesticide sprayers. This exposes them to dangerous chemicals with no recognition of the risks to their health and no steps being taken to provide them with information or protection to prevent their exposure. Cleaning and care work are known to be performed by a female dominated workforce. Women's health is then impacted by "skin diseases that women suffer when working with wet hands and the chemical cleaning and sterilizing agents as well as protective gloves containing latex dust.(…) In care work, catering, private and public service activities and education sector, women are more exposed to infectious diseases than men."[10]

The assumption that "one size fits all" – and the prevalence of discriminatory attitudes – put women at risk

There is still a widespread view that "one size fits all" and that it is sufficient to provide "unisex" uniforms and PPE. Women are not small men, and small men are not women! PPE is supposed to protect workers not create additional hazards. Women report being asked to wear overalls designed for men or outsized safety shoes, gloves or coats at work – and a woman astronaut could not take part in the first all-women spacewalk because of a lack of a suitable spacesuit (in medium size).[11]

A similar assumption often applies to work equipment. A **hotel chain** introduced a new supply cart for the use of hotel room cleaners. These workers could not turn it easily and refused to use it because they were suffering pain. When ergonomists called in by the cleaners' union examined the equipment, it was found that the push bar was too high and the cart was not suitable for the work environment. For example, it was difficult to push it across thick pile carpets. The cart had also been designed so it was just right for a man of European origin to use (rather than for shorter in height mainly Latina women workers).[12]

Discriminatory attitudes continue to prevail in relation to **workplace dress codes** including employers requiring workers to wear revealing clothing or high heeled shoes, compromising their dignity and putting their health and safety at risk. Women are fighting back – in the UK a woman receptionist petitioned Parliament asking them to **make it illegal for a company to require women to wear high heels at work**[13] after she was told to swap smart low heeled shoes for high heeled shoes when she reported for work. This resulted in the government issuing new guidance on workplace dress codes flagging up health and safety and discrimination issues.[14] And more recently women in Japan petitioned their government on the same issue.[15]

Women are not small men, and small men are not women!

Specific occupational health and safety issues for women workers

As mentioned, IUF affiliates have identified a number of women's occupational health and safety issues which need to be addressed urgently.

Preventing violence in the world of work including gender-based violence such as sexual harassment. The recently adopted ILO Convention (C190) and Recommendation (R206) concerning the elimination of violence and harassment in the world of work provide very useful guidance in that respect.[16] The IUF and its affiliates were involved in the negotiations that led to the adoption of these important and progressive international instruments and are campaigning for the ratification of C190.

Pregnancy and reproductive health and the need to protect pregnant workers and their unborn child from harm at work by carrying out and implementing appropriate workplace health and safety risk assessments for all women of childbearing age (as women are often not aware of their pregnancy for some time).[17]

Access to clean, safe, secure and separate toilet and welfare facilities at work. Lack of access can create or exacerbate health problems for workers as well as put them at risk of violence, including sexual violence.

Menstruation and period dignity at work

Women workers should be supported at work when menstruating. Toilet and rest facilities for women must be available, clean, secure and suitable for women. IUF affiliate Unite (UK and Ireland) has a **period dignity** campaign.[18] The campaign aims are set out below.

1. Changing attitudes towards periods – periods should not be embarrassing for anyone

2. Employers to provide sanitary products in the workplace – we want this to be the norm for every workplace

3. Places of education to provide sanitary products for students and employees - we want this to be the norm so that young women's education does not suffer

4. Ensure tax is removed from all sanitary products

5. Support Period Poverty campaign groups. Women and young girls should have access to these vital products. Nobody should face period poverty

Women are more likely to report occupational stress than men.

Menopause

The menopause is not an illness nor does it affect only older women, but it can have adverse physical and emotional effects for women and individual symptoms vary widely. It is an occupational health issue, and it is important that trade unions raise the issue in the workplace and make sure that employers are aware of their responsibility to ensure that conditions in the workplace do not make the symptoms worse. Women who are experiencing the menopause also need to know that there is someone to whom they can go to discuss any difficulties they are having. Some affiliates have produced guidance for union representatives.[19]

Osteoporosis

Osteoporosis occurs when the struts which make up the mesh-like structure within bones become thin causing them to become fragile and break easily, often following a minor bump or fall.[20] This may have implications for employment, depending on the individual's situation. Women are more at risk of developing osteoporosis than men because the hormone changes that occur in the menopause directly affect bone density. Osteoporosis may be regarded as a disability under equality law and employers should provide appropriate support and reasonable adjustments in consultation with the worker.

Musculoskeletal Disorders[21]

Work-related musculoskeletal disorders (MSDs) cover a broad range of health problems associated with repetitive and strenuous work. MSDs affect both men and women but there is a clear difference in prevalence of symptoms due to the use of tools and equipment that have not been designed for female body,[22] as mentioned above. These health problems range from discomfort, minor aches and pains, to more serious medical conditions which can lead to permanent disability. Every year millions of workers are affected by MSDs. The most well-known MSDs are low back pain and work-related upper limb disorders. MSDs are more prevalent in some sectors including retail, hotels and restaurants and manufacturing, but also in flower packhouses. When it comes to lower limb disorders, women are significantly exposed to prolonged standing and walking (e.g. in the retail sector, **the hotel and catering sector and cleaning work)**. MSDs can be exacerbated by domestic work at home and other issues such a pregnancy and hormonal cycles.

Stress

Women are more likely to report occupational stress than men.[23] Some jobs which involve contact with third parties such as clients and customers (including **in hotel and catering and domestic work**) can expose workers to damaging stressors including violence and harassment. Effective workplace health and safety policies should be in place to prevent occupational stress (and violence) and reporting of stress should be supported and encouraged to ensure that stress is managed effectively with a view to prevention. Stress and musculoskeletal disorders can be linked.

Hazardous substances

Exposure to chemicals (for example pesticides, cleaning products), exposure to dusts (for example grain, asbestos, mould, fungal, silica) and exposure to biological hazards (for example human and animal waste) are all hazards faced by women workers in many industries **including hospitality, agriculture and domestic work**.

Employers must protect workers from exposures to all hazardous substances, find safer alternatives and ensure that appropriate personal protective equipment (i.e. equipment that is designed for women, not men, not unisex) is provided (as a last resort) if exposure cannot be prevented by other means.

Workers' compensation

Failure to research and recognise women's occupational health issues not only harms workers, but stops women being compensated for work related injury and ill health. For example:

BREAST CANCER

In the UK, the only work-related women's cancer which attracts government workers' compensation is breast cancer and only if it arises from exposure to ionising radiation.

In 2007 the WHO's International Agency for Research into Cancer (IARC) concluded that shift work involving disruption of the circadian rhythms (the "body clock") may cause breast cancer. In spite of this the only country so far which awards workers' compensation is Denmark.

In 2019 IARC, after further deliberations, concluded that working night shifts may cause cancer in humans, mentioning again the possible link between breast cancer and night shifts.[24]

> **Musculoskeletal disorders and workers' compensation – union victory for women workers**
>
> IUF Spanish affiliates CC.OO servicios and FeSMCUGT won recognition of occupational diseases affecting hotel housekeepers including musculoskeletal disorders affecting the hand, wrist, elbow, forearm and shoulder. These include carpal tunnel syndrome, trigger finger, tennis elbow, golfer's elbow and chronic bursitis (inflammation of the joints), see http://www.iuf.org/w/?q=node/6410.

Gender-responsive health and safety

The use of the term **gender neutral** may apply in some situations, but a gender neutral approach to occupational health and safety is dangerous for women, especially as there is over-reliance on OHS data on men. OHS decisions must be based on an inclusive, integrated and gender-responsive approach: collecting and relying upon appropriate evidence as well as ensuring that women as well as men are involved in good time, so that their view can be taken into account in the decision making which affects their health and safety at work.

The European Union, the ILO, and some governments have developed guidance and tools, and targeted labour inspection (for example in Austria,[25] to encourage the integration of gender in workplace health and safety management and regulatory activity).

An inclusive, integrated and gender responsive approach to health and safety at work is central to establishing equal rights to protection, and safer and healthier workplaces for all.

The ILO guidelines **10 Keys to Gender Sensitive OSH practice** aimed at governments, employers and workers highlight the need to:

- Develop policies to address inequalities
- Gender mainstreaming: explore the effects of gender roles on safety and health
- Include gender in risk assessment
- Analyse risk in both male and female dominated occupations
- Ensure that OSH research (including government research) take account of gender differences
- Develop systems to collects sex-disaggregated OSH data
- Incorporate the findings from OSH research and data into policy making and workplace action
- Equal access to occupational health services for all
- Provide gender sensitive information, education, training

- Design workplaces, work equipment, tools, PPE for women & men
- Consider working time arrangements and work-life balance
- Fully involve women and men workers in the decisions that affect their safety and health at all levels.

What next? Workplace actions could include working with the employer to

- Collect separate data on occupational health for women and men to help identify gender specific problems and inform preventive action;
- Ensure that women's health and safety concerns are discussed at health and safety meetings and consultations by encouraging and supporting women's participation;
- Provide information, instruction and training on OHS and gender/women;
- Take sex and gender differences into account in risk assessment of all work activities;
- Ensure that pregnancy, breastfeeding and reproductive health are covered and actioned;
- Ensure gender based workplace violence (such as sexual harassment) is treated as a health and safety issue – note that the workers' group made sure that a model policy on sexual harassment was included in the ILO code of practice Safety and Health in Agriculture as well as many other actions by the IUF and its affiliates;
- Recognise domestic violence and abuse as a health and safety issue and implement agreed policies to support women workers (see the recent decision in New Zealand to provide leave; or in many Canadian states), as stated in the recently adopted ILO Convention no. 190 and Recommendation no. 206;
- Take into account sex and gender differences when providing uniform and protective equipment – one size does not fit all!
- Ensure sickness absence policies do not discriminate e.g. in relation to menopause, miscarriage, pregnancy, menstruation, osteoporosis and other women's health conditions;
- Encourage reporting of occupational injuries and ill health by all workers and take effective action in response to workers' concerns, including fighting for their recognition at the national level.

For a fuller checklist[26] of actions to be considered by trade unions please see Annex 2

As there is still a data gap in OSH research on women, you can do your own research in the workplace e.g. surveys, body and hazard/workplace mapping (see Annex 1)

Conclusion

Gender-responsive health and safety practice is about securing decent work. It is generally recognized that trade unions play a key role in improving health and safety at work across the world.

So it is essential that women workers are included in all the discussions affecting them at work so that the trade union can work with the employer to ensure they respond appropriately to prevent women (and men) being harmed by their work. This means ensuring (in consultation with the trade union/the workers concerned) that work tasks, jobs, systems, work equipment, personal protective equipment (and uniforms) are suitable for women, and workstations and work areas, and are adapted to ensure women – and of course men – have safe and healthy workplaces.

It is also crucial to protect women by ensuring that occupational health and safety research involves the women workers who are affected. But research findings (such as the increased risk of breast cancer arising from doing shift work) should not be used as an excuse to exclude women from shift work or restrict their participation in specific jobs, sectors or occupations. Working shifts can cause a range of health problems – for both men and women.

Fighting for a gender approach to OHS will benefit everybody in the fight for decent work. This approach allows in depth discussions on OHS which include all workers and which should lead to focusing OHS measures appropriately to improve safety and security for all. It is prevention that is key, involving workers and their union representatives in developing and implementing health and safety measures in the workplace. Though health and safety hazards and risks affecting working women have been overlooked and not recognised, addressing all hazards in a gender-responsive way will include transgender men and transgender women and people with other gender identities.

"…Gender sensitivity is more than comparing men's and women's disease and injury rates. It is a re-examination of workplace reality that imposes changes in the usual way of proceeding in order to improve the quality of information about male and female workers." [27]

REFERENCES

1 ILO World Employment Social Outlook https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_619577.pdf

2 ILOSTAT November 2018. https://www.ilo.org/ilostat/faces/oracle/webcenter/portalapp/pagehierarchy/Page3.jspx?MBI_ID=33&_adf.ctrl-state=32xp7jlbq_57&_afrLoop=373944439659772&_afrWindowMode=0&_afrWindowId=32xp7jlbq_54#!%40%40%3F_afrWindowId%3D32xp7jlbq_54%26_afrLoop%3D373944439659772%26MBI_ID%3D33%26_afrWindowMode%3D0%26_adf.ctrl-state%3D1cy0k0vzsb_9

3 http://www.unwomen.org/en/news/in-focus/csw61/redistribute-unpaid-work accessed 14 March 2019

4 http://www.womensbrainproject.com/facts/

5 https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/ageing/articles/livinglongerhowourpopulationischangingandwhyitmatters/2019-03-15 accessed 20 March 2019

6 https://www.degruyter.com/view/journals/reveh/33/4/article-p331.xml

7 Criado Perez, C., 2019, *Invisible women. Exposing data bias in a world designed for men*, Chatto and Windus, London, p. 116.

8 Sorrentino E., Vona R., Monterosso D., Giammarioli A. M., "Gender issues on occupational safety and health", http://old.iss.it/binary/publ/cont/ANN_16_02_10.pdf, p. 194 accessed 18 July 2019.

9 https://www.ilo.org/safework/whatsnew/WCMS_329109/lang--en/index.htm accessed 14 March 2019.

10 Sorrentino E., Vona R., Monterosso D., Giammarioli A. M., op. cit., p. 193.

11 See, e.g. https://www.nytimes.com/2019/03/25/science/female-space-walk-canceled.html

12 Seifert, A.M., Messing, K. 2006. Cleaning up after globalization: An ergonomic analysis of work activity of hotel cleaners. *Antipode* 38(3): 557-577

http://www.invisiblequifaitmal.uqam.ca/en/publications/Cleaning%20up%20after%20globalization.pdf

13 https://petition.parliament.uk/archived/petitions/129823

14 https://www.gov.uk/government/publications/dress-codes-and-sex-discrimination-what-you-need-to-know

15 *The Guardian newspaper* 3 June 2019 https://www.theguardian.com/world/2019/jun/03/women-in-japan-protest-against-having-to-wear-high-heels-to-work-kutoo-yumi-ishikawa

16 https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_711570.pdf and https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_711575.pdf

17 As stated in Article 18 of the Safety and Health in Agriculture Convention, 2001 (No. 184) and in Para 11 of the Safety and Health in Agriculture Recommendation, 2001 (No. 192).

18 https://unitetheunion.org/campaigns/unite-demands-period-dignity/

19 https://unitetheunion.org/media/1480/womens-health-safety-well-being-at-work-unite-guide.pdf

20 See for example https://theros.org.uk/media/98121/employment-and-osteoporosis.pdf

21 https://oshwiki.eu/wiki/Introduction_to_musculoskeletal_disorders

22 Sorrentino E., Vona R., Monterosso D., Giammarioli A. M., op. cit., p. 193.

23 http://www.hse.gov.uk/statistics/causdis/stress.pdf

24 https://www.iarc.fr/wp-content/uploads/2019/07/QA_Monographs_Volume124.pdf

25 Mainstreaming gender into health and safety practice, EU-OSHA – European Agency for Safety and Health (2014)

26 Adapted from a Trades Union Congress gender and occupational safety checklist 2017

https://www.tuc.org.uk/resource/gender-occupational-safety-and-health

27 Messing, K., L. Punnett, M. Bond, K. Alexandersson, J. Pyle, S. Zahm, D.Wegman, S. R. Stock, S. de Grosbois. (2003) "Be the fairest of them all: challenges and recommendations for the treatment of gender in occupational health research", in *American Journal of Industrial Medicine*, 43: 618-629

http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1023.454&rep=rep1&type=pdf

ANNEX 1.   Mapping workplace hazards for women workers[28]

Why use mapping?

Unions around the world are using mapping techniques to help workers identify health and safety hazards at work. This collective approach helps protect individual workers who are afraid to speak up about their concerns.

Mapping techniques provide a way for workers to use their own experiences to document workplace health and safety problems. This practical and collective approach not only helps identify issues and raise awareness but is also the key to recruitment or organising campaigns.

These techniques are participatory methods by which workers gather and analyse their own knowledge and experiences. With the information gained, workers and unions can develop strategies to eliminate or reduce workplace hazards and to improve health and safety on the job.

Mapping can also be used to show how workers are affected by what they did years ago at work (for example exposure to asbestos or chemicals).

Mapping method

Start by mapping what problems workers are having (body mapping), and then look at the causes (hazard/workplace mapping). This is a way of involving all your members. It can often be done during a work break and, once people begin to do it, they often find it to be empowering as they realise that they are not alone.

Body mapping

Body mapping is participatory – and fun. It can be used effectively where workers speak different languages or don't read well, and is a quick way to make sense of complex situations. Maps can show the different experiences of workers by age, seniority, job or gender.

Body maps can show the patterns of symptoms and the long-term effects of hazards: workplace maps give an overview that individuals do not have. You can use the two types of maps together to see the workplace in a new light.

The first step is to find common problems – then the detective work to find the hazards behind the symptoms begins.

Steps to take

1. Make a front and back outline of a body on a large sheet of paper.

2. Decide what your questions are. Are you looking for aches and pains?   All the symptoms workers have now? Long-term effects, such as cancer, chronic pain or stress? Do you want to see the effects by gender, age, job or seniority?

3. Organise the participants into groups. If you want information by age, for example, divide them into groups based on that category.

Give each group coloured pens or pencils, or sticky dots, to mark their symptoms. One method uses red = aches and pains, green = where you feel stress, blue = other symptoms that may be work-related. To get the overall picture, get them to place their mark on the large body map. The maps illustrated below, created by migrant domestic workers (The Voice of Domestic Workers[29]) actually use **different** colours. It's up to you! And don't forget to look at both the back and front of the body.

STRESS
CHEMICALS
ACHES & PAINS
OTHER PROBLEMS

You can use any method you like to record information so long as the method is clear and consistent.

See also the example below of a collective body map in which these workers used coloured starburst cards to record their health concerns.

Hazard/workplace mapping

You can also use mapping to identify the hazards behind the symptoms that show up on the body map.

Before making any kind of map, get the group of workers to discuss the following:

1. How is the work organised (e.g., number of workers, shifts, hours worked and breaks)?
2. What is the work process (how work is done, the tasks, the machines & tools used)?
3. What are the hazards (using the categories below)?
4. What complaints or symptoms show up in conversations?
5. What measures are being taken to prevent or reduce the hazards?
6. What else could or should be done?

Groups of workers then draw the layout of their workplace or work area. Be sure to include doors, windows, offices, washrooms, desks, machinery and equipment. The larger the map, the more detail you can have. Try to include the questionnaire information on the map without making it too cluttered.

The picture below illustrates the method and this fact sheet is available for download (see Resources list below).

Mapping out work hazards

Down in the packing department just about everyone moans about tired legs, aching backs and sore wrists.

In the office, it's headaches, sore eyes and wrist problems again. And when the drivers come in they grumble about being over-tired, or about their lower back problem or their dodgy guts.

Sometimes it's easy to produce a mental picture of how our jobs affect our health. Workplace risk mapping is a technique where workers can get together to get these concerns down on paper.

Tracking down work related health problems by risk mapping

Risk mapping has been used by trade unions, environmental groups and other organisations in the United States, Mexico, Canada, Brazil and Italy to assess occupational health and environmental pollution risks in workplaces, communities and at state level.

Risk maps differ from other approaches by avoiding "expert" assessments. Workers look at where they work, what they work with and any physical, chemical, biological or "psychosocial" problems that might arise when doing the job.

A US guide to risk mapping prepared by the University of California's Labor Occupational Health Program (LOHP), says the technique takes the control away from occupational health professionals "by drawing upon the knowledge of workers and acknowledging the vital contribution they make. Risk maps are developed from everyday, on-the-job experiences."

It also means the results are based on workers' genuine concerns and symptoms, and not somebody else's perception of what is an "acceptable" risk or a "significant" problem.

In the case of official chemical standards, LOHP says: "Worker symptoms may be ignored in setting these limits, and interactions with other chemical and physical conditions are not adequately addressed."

Getting started

The basic approach involves drawing up a map - it might be anything from a rough sketch of the workplace to a blueprint - and, with the help of a group of workers from the area mapped, highlighting where hazards are found, where toxins are used, where jobs cause stress and strain, where there is too much to do and too few to do it... Don't make the map too small - there will usually be a lot of information to squeeze in.

Risk maps can be done very informally. This can be useful where workers are not confident or have literacy or language difficulties. However, the more effort involved, the more the maps are likely to reveal. A more thorough approach, according to LOHP, involves seven key steps:

Step 1. Form a risk mapping planning committee. This should involve union safety reps and shop stewards, but should also look to involve shopfloor workers from a range of jobs.

Step 2. Select or develop a workplace health and safety questionnaire. Most unions will have examples they can supply. A questionnaire may be unnecessary if relatively few workers are employed in the area under investigation - they can pass on their concerns directly.

Step 3. Where applicable, distribute the questionnaire among workers in a given workplace or work area, all who tend to face similar hazards. Make sure all problems affecting all workers are covered - workers on different shift patterns, non-routine work like maintenance or deliveries, changes in work pace to meet deadlines.

Step 4. Transfer the findings from the questionnaire onto the risk map. If a questionnaire has not been used, bring workers together and allow them to add a note of their problems directly onto the risk map.

Step 5. Bring together workers from the mapped area to review the risk map and add to it.

Step 6. With all the workers, review the completed risk map.

Step 7. Take action to improve conditions and revise the risk map to show where these improvements have occurred.

Hazard type

A clearer picture emerges if hazards are coded using colours or symbols, for example:

◆ **Red: Physical hazards.** Noise, heat/cold, leaks, slippery floors, no guards on equipment, radiation, accidents.

● **Blue: Chemical hazards.** Dusts, vapours, fumes, gases, mists.

■ **Brown: Ergonomic hazards.** Fast paced, repetitive work; work which requires physical stress or pressure on the body; work which requires an awkward posture, or any part of the body to stay still, for long periods of time; exposure to local or whole body vibration; poorly designed work procedures.

▼ **Yellow: Infection hazards.** Viruses, bloodborne diseases, body fluids, moulds, bacteria.

⌂ **Purple: Stressors.** Not enough training, forced overtime, speed-up, monotony, machine-paced work, piece rates, harassment, discrimination, fear of violence.

Filling in the gaps

Add on to the risk map what you know about the risks and what is being done about them.

● **Statistics:** Is one job or process associated with a lot of complaints, compensation claims, injuries or sick leave?

● **Reports:** Have management risk assessments, health surveillance or technical reports identified any existing or potential problems?

● **Surveys:** Has the union conducted any surveys that have identified problem areas?

● **Consultation:** What problems have management informed workers of?

● **Information:** Do product labels, datasheets or warning signs give any clues?

Once completed the risk map should contain details of:

● The main task performed in the workplace;
● The main hazards and their severity;
● The number of exposed and/or affected workers;
● The sources of the occupational hazards;
● Health effects these hazards can cause, based on workers' experiences and information from other sources; and
● Possible measures to reduce exposures and possible adverse health effects.

Drawing conclusions

Soon a picture of all the workplace's problem areas will emerge, an at-a-glance guide to the risks management should be doing all that is "reasonably practicable" to minimise. Risk maps allow workers to keep track of management's activities to remedy the hazards the map identifies.

Risk mapping does work. In the US, risk maps have been used to influence public policy, including land use planning, goal setting for toxics use reduction (see page 4), and to initiate "toxics watch" surveillance programmes.

Risk mapping has another value - it frequently turns up unexpected results. One worker might think that bad back, sore wrists or blistered skin is their own personal misfortune. When they discover everyone working with a particular process or substance has similar problems, they know the problem is bad conditions not bad luck.

It's just the job

Casino workers expressed concerned about the health risks of their work. A team of eight of the Casino Windsor workers, members of the Canadian Autoworkers' Union (CAW) and most on the health and safety committee, were selected to form a risk mapping research team. The union also drafted in workers from a local occupational health advice centre to assist the team.

The workforce was divided into mapping groups, each involving about half a dozen workers. Their initial maps revealed some hazards were universal, others were very job specific:

● The dealers highlighted RSI and noise from slot machines. They also feared reprisal from patrons who were angered by losing.
● The porters (cleaners) were concerned about ergonomic issues (pushing, pulling and carrying equipment), use of certain cleaning agents, overcrowding and noise, and biological hazards from body fluids and bacteria. They mentioned "filthy" bathrooms and spills of blood, urine and vomit.
● Slot machine department staff reported the problems of noise and patron abuse.
● Security department workers reported that prolonged standing and fear of patron violence were important issues for them. They told of patrons who had tried to assault them or hit them with beer bottles or run them over with cars.
● Office workers were concerned about over-crowding, stress and noise.
Solutions suggested by the participants to reduce stress and noise levels were taken up by the union. Other issues are still being investigated by the team.

Hazards are often divided into six categories:

1. Safety (immediate causes of injuries)
2. Physical (energy sources such as radiation, temperature, noise)
3. Chemical (dusts, liquids, gases)
4. Biological or communicable (infection, needlesticks, mould)
5. Ergonomic (force, repetition, posture, design of control panels)
6. Work organisation/psychosocial risks (things that cause stress such as long or odd work schedules, no discussion about the job, workload, work/life balance).

Draw a different large, coloured circle or shape to show each category of hazard. The number of workers who may be exposed to the hazard can be marked inside the circle, using sticky dots or some other format to show where individual people work.

Hazards Magazine has developed several fact sheet tools which describe the method. These are listed below with the link to the resources on their website.

Using the maps

The first question to ask after you've made any of these maps is 'What do you see?' Look for patterns, and for things that don't fit the patterns.

Put together maps of work areas to get the overall picture of a workplace. Over time, come back to them to record new information or check on changes.

Other methods of collecting visual information

In addition to conventional survey questionnaires, IUF affiliates have also used visual body map surveys which are very useful when it is not possible to get workers together in one place.

An example for hotel housekeepers is shown here.

Workers are asked to mark the box pointing to the part of their body where work makes it hurt and indicate the severity. The results are then collated and analysed. This method has been used successfully in other industrial sectors to collect and then collate information about musculoskeletal disorders. As well as raising health and safety awareness, this method proved to be a successful recruitment tool for trade unions.

In another example, a bodymapping survey tool which had been developed by the labour inspectorate was successfully converted by an affiliate for completion on a mobile phone by railway catering workers concerned about musculoskeletal injuries. The findings were generated instantly and the members were then able to share the results quickly with their employer to assist in negotiating improvements.

Other visual information: cancers and their work causes

The ITUC and *Hazards Magazine* issued this "at a glance" guide to cancer hazards at work for International Workers' Memorial Day 2019. You can use this to support your DIY research.

www.hazards.org/cancer/work

Cancers and their work causes
An ITUC/Hazards at-a-glance guide to cancer hazards at work

Nasal/sino-nasal and nasopharynx cancer: Chromium; nickel; some evidence for benzene, reactive chemicals and formaldehyde; styrene; metalworking fluids; natural fibres including wood dust; ionising radiation. Associated with work in footwear manufacture.

Laryngeal cancer: Metalworking fluids and mineral oils; natural fibres including asbestos; some evidence for wood dust exposure; exposure to reactive chemicals including sulphuric acids. Excesses seen in rubber workers, nickel refining, and chemical production using the "strong acid" process.

Mesothelioma: Asbestos; erionite.

Lung cancer: Arsenic; beryllium; cadmium; chromium; nickel; solvents, particularly aromatics (benzene and toluene); ionising radiation, including radon exposure to radon anded uranium, haematite and other metal ores miners; reactive chemicals including BCME, CCME, mustard gas, welding fumes, plus some evidence for sulphuric acids; environmental tobacco smoke; petrochemicals and combustion byproducts, including PAHs and diesel exhaust fumes; some inconsistent evidence on pesticides, including DDT; asbestos; silica; wood dust; some man-made fibres, including ceramic fibres. Some evidence supports excess risks in specific industries, including the rubber industry, work as a painter.

Pancreatic cancer: Acrylamide; metalworking fluids and mineral oils. Some evidence for cadmium, nickel, solvent exposure, reactive chemicals, possibly formaldehyde. Limited evidence for pesticides. Some evidence for DDT and DDT derivatives.

Liver and biliary cancer: Ionising radiation; vinyl chloride and angiosarcoma of the liver; PCBs. Some evidence for arsenic, chlorinated solvents and reactive chemicals.

Bladder cancer: Arsenic; solvents, particularly tetrachloroethylene; aromatic amines; petrochemicals and combustion products, including polycyclic aromatic hydrocarbons, diesel exhaust fumes; metalworking fluids and mineral oils; ionising radiation; work in the rubber industry; work as a painter.

Ureter: Work as a firefighter.

Testicular cancer: Evidence for endocrine disrupting chemicals (e.g., phthalates, PCBs and polyhalogenated hydrocarbons). A literature review found significantly elevated risks in men working in agriculture, tanning and mechanical industries, and consistent associations with painting, mining, plastics, metalworking and occupational use of hand-held radar.

Prostate cancer: Links to cadmium, arsenic and some pesticides, notably herbicides and other endocrine disrupters. Excess risks have been found for exposure to metallic dusts and metalworking fluids, PAHs and liquid fuel combustion products, and farmers and pesticide applicators.

Leukaemia: Organic solvents, notably benzene, with quite strong evidence for childhood leukaemia and paternal exposure to aromatic and chlorinated solvents, paints and pigments; reactive chemicals; ionising radiation; conflicting evidence on non-ionising radiation; pesticides, including carbon disulphide, phosphine, styrene and methyl bromide, plus limited evidence for DDT. Some evidence of increased risk in the petroleum industry and those exposed to ethylene oxide.

Soft tissue sarcomas: Vinyl chloride monomer (angiosarcoma of the liver); pesticides. Ewing's sarcoma in pesticide- exposed workers.

Brain and other CNS cancers: Lead; arsenic; mercury; solvents, including benzene, toluene, xylene and methylene chloride; pesticides; n-nitroso compounds, work in the rubber industry.

Oesophageal cancer: Suggestive evidence for solvent exposure, particularly tetrachloroethylene. Metalworking fluids; asbestos; work in the rubber industry.

Thyroid cancer: Ionising radiation.

Breast cancer: Ionising radiation; endocrine disrupters; solvents; environmental tobacco smoke; PCBs; pesticides, including DDT/DDE, hexachlorobenzene, lindane, hep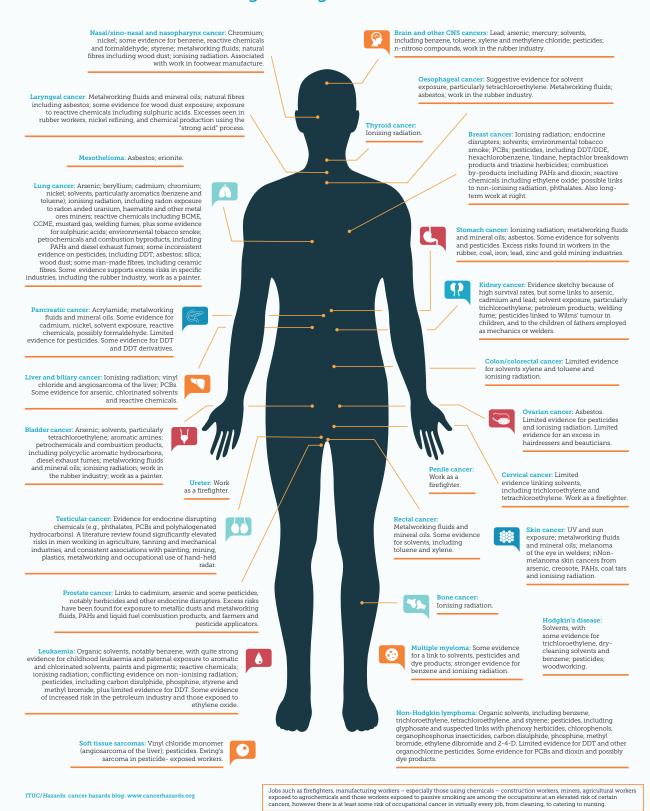tachlor breakdown products and triazine herbicides; combustion by-products including PAHs and dioxin; reactive chemicals including ethylene oxide; possible links to non-ionising radiation, phthalates. Also long-term work at night.

Stomach cancer: Ionising radiation; metalworking fluids and mineral oils; asbestos. Some evidence for solvents and pesticides. Excess risks found in workers in the rubber, coal, iron, lead, zinc and gold mining industries.

Kidney cancer: Evidence sketchy because of high survival rates, but some links to arsenic, cadmium and lead; solvent exposure, particularly trichloroethylene; petroleum products; welding fume; pesticides linked to Wilms' tumour in children, and to the children of fathers employed as mechanics or welders.

Colon/colorectal cancer: Limited evidence for solvents xylene and toluene and ionising radiation.

Ovarian cancer: Asbestos. Limited evidence for pesticides and ionising radiation. Limited evidence for an excess in hairdressers and beauticians.

Penile cancer: Work as a firefighter.

Cervical cancer: Limited evidence linking solvents, including trichloroethylene and tetrachloroethylene. Work as a firefighter.

Rectal cancer: Metalworking fluids and mineral oils. Some evidence for solvents, including toluene and xylene.

Skin cancer: UV and sun exposure; metalworking fluids and mineral oils; melanoma of the eye in welders; nNon-melanoma skin cancers from arsenic, creosote, PAHs, coal tars and ionising radiation.

Bone cancer: Ionising radiation.

Hodgkin's disease: Solvents, with some evidence for trichloroethylene, dry-cleaning solvents and benzene; pesticides; woodworking.

Multiple myeloma: Some evidence for a link to solvents, pesticides and dye products; stronger evidence for benzene and ionising radiation.

Non-Hodgkin lymphoma: Organic solvents, including benzene, trichloroethylene, tetrachloroethylene, and styrene; pesticides, including glyphosate and suspected links with phenoxy herbicides, chlorophenols, organophosphorus insecticides, carbon disulphide, phosphine, methyl bromide, ethylene dibromide and 2-4-D. Limited evidence for DDT and other organochlorine pesticides. Some evidence for PCBs and dioxin and possibly dye products.

ITUC/*Hazards* cancer hazards blog: www.cancerhazards.org

Jobs such as firefighters, manufacturing workers – especially those using chemicals – construction workers, miners, agricultural workers exposed to agrochemicals and those workers exposed to passive smoking are among the occupations at an elevated risk of certain cancers, however there is at least some risk of occupational cancer in virtually every job, from cleaning, to catering to nursing.

Workplace Mapping and DIY Research Resources

Your own trade union

Check your union's website and ask your union if they produce resources on DIY health and safety research

International Labour Organization

Barefoot Research – a Worker's Manual for organising on work security. This book, which is freely downloadable, was written by trade unionists and describes a range of DIY research methods. https://www.ilo.org/public/english/protection/ses/info/publ/2barefoot.htm

World Health Organization

Protecting Workers' Health Series No. 11 – Building Healthy and Equitable Workplaces for Women and Men: A Resource for Employers and Worker Representatives, https://www.who.int/occupational_health/publications/Protecting_Workers_Health_Series_No_11/en/

Hazards Magazine resources www.hazards.org

Hazards Detective: online interactive tool to find out where it hurts
http://www.hazards.org/detective/index.htm
Hazards Factsheets
Body of Evidence: Body mapping http://www.hazards.org/diyresearch/bodymapping.pdf
Mapping out work hazards
http://www.hazards.org/diyresearch/riskmapping.pdf
Map your world – Examine how workplace issues affect your whole life
http://www.hazards.org/workedover/index.htm
Get Mapping - http://www.hazards.org/diyresearch/getmapping.htm
Cancers and their work causes (ITUC/Hazards Magazine)
https://www.ituc-csi.org/IMG/pdf/cancer-work-causes_en.pdf

The factsheets are best printed on A3 size paper so they can be read more easily.

Seeing the Workplace with New Eyes Manual (Canada)

https://www.mgeu.ca/news-and-multimedia/news/read,article/95/seeing-the-workplace-with-new-eyes#st-hash.73iJDQAQ.dpbs

Trades Union Congress (London)

Health and safety and organising – A guide for reps

Includes a chapter 4 includes text on mapping which has been adapted for this resource
https://www.tuc.org.uk/research-analysis/reports/health-and-safety-and-organising-guide-reps

Women and Gender Health and Safety: selected information and resources

10 Keys for Gender Sensitive OSH Practice – Guidelines for gender mainstreaming in Occupational Safety and Health
http://www.ilo.org/safework/info/publications/WCMS_324653/lang--en/index.htm

ILO Maternity Protection resources

https://www.ituc-csi.org/ilo-information-resources

ILO code of practice on safety and health in agriculture includes a sample sexual harassment policy and text to encourage labour inspectorates to mainstream gender in their regulatory activity.
https://www.ilo.org/global/publications/books/WCMS_159457/lang--en/index.htm

European Agency for Safety and Health at Work

The European Agency for Safety and Health (EU-OSHA) has done a lot of work on gender, women, and diversity (including older women) in occupational safety and health including two major reports on women's health and safety and on gender mainstreaming, and other resources. For example:
https://osha.europa.eu/en/themes/women-and-health-work

Fact sheet 42 – Gender issues in safety and health at work
http://osha.europa.eu/en/publications/factsheets/42

Fact sheet 43 – Including gender issues in risk assessment
http://osha.europa.eu/en/publications/factsheets/43

International TUC

International Workers' Memorial Day Resources 2019 – No to dangerous substances
https://www.ituc-csi.org/IMG/pdf/chemical_reaction_en.pdf

Cancers and their work causes

Body infographic
https://www.ituc-csi.org/IMG/pdf/cancer-work-causes_en.pdf

Trades Union Congress (London)

Gender in occupational safety and health report and checklist
https://www.tuc.org.uk/resource/gender-occupational-safety-and-health

Personal Protective Equipment and women

https://www.tuc.org.uk/research-analysis/reports/personal-protective-equipment-and-women

Supporting working women through the menopause

https://www.tuc.org.uk/sites/default/files/TUC_menopause_0.pdf

Pregnancy, breastfeeding and health and safety

https://www.tuc.org.uk/resource/pregnancy-breastfeeding-and-health-and-safety

Hazards Magazine and website www.hazards.org

Resources on women's health and safety include:

Expecting More (2019) – pregnancy and health and safety
http://www.hazards.org/images/h146expectingmore.jpg

Women and Work Hazards – and Women make great safety reps!
www.hazards.org/women/

Women's Work – check it out!
www.hazards.org/haz101/h101centre.pdf

Menopause

www.hazards.org/haz82/menopause.pdf

European Trade Union Institute

European Trade Union Institute Conference "Women's Health and Work" in 2015 – here is a link to the report, presentations and some videos.
https://www.etui.org/Events/Women-s-health-and-work.-Sharing-knowledge-and-experiences-to-enhance-women-s-working-conditions-and-gender-equality

European Trade Union Institute Conference "Women, Work and Cancer" in 2018
https://www.etui.org/Events/Conference-Women-Work-and-Cancer

Examples of recent published research

Lack of research on women's exposure to pesticides and other chemicals
https://www.degruyter.com/downloadpdf/j/reveh.2018.33.issue-4/reveh-2018-0018/reveh-2018-0018.pdf

Night work and breast cancer
https://nouvelles.umontreal.ca/en/article/2018/09/13/working-at-night-is-associated-with-a-greater-risk-of-breast-cancer-in-women/

Books

Pain and Prejudice: What Science Can Learn about Work from the People Who Do It, by Karen Messing, (Toronto, 2014)

Invisible Women: Exposing data bias in a world designed for men, by Caroline Criado Perez (Chatto & Windus, London, 2019).This has an extensive bibliography.

---

28 Adapted from TUC Health and Safety and Organising, 2016, https://www.tuc.org.uk/resource/gender-occupational-safety-and-health
29 https://www.thevoiceofdomesticworkers.com

ANNEX 2. Gender checklist on occupational health and safety[30]

This checklist is not intended to be a comprehensive list of specific issues relating to gender, but instead some suggestions of what union health and safety representatives should look at to make sure that the relevant issues in the workplace are identified and addressed in a gender sensitive way.

Part 1 – Working with the employer

Consultation

- Is there a Joint Health and Safety Committee or other consultative structure and does it cover everyone including part-time, contracted and temporary workers?

- Are health and safety issues and priorities of concern to women regularly discussed at the Joint Health and Safety Committee or other consultative structures, and if items are identified are they dealt with?

Risk management

- Are risk assessments carried out and implemented by the employer?

- Do risk assessments take account of sex and gender differences?

- Have all people involved in risk assessment and risk management been trained to be aware of sex and gender differences affecting men's and women's health and safety at work?

- Are sex and gender differences taken into account in risk assessments relating to substances hazardous to health including the greater likelihood that women will be exposed to chemicals at home?

- Are sex and gender differences taken into account in manual handling risk assessments and in assessments of postural problems including prolonged standing or sitting?

- Are gender differences taken into account with all relevant types of work equipment and work stations use?

- Are sex and gender differences taken into account when dealing with staff uniform, official workwear or personal protective equipment (PPE) issues at the workplace?

- Are risk assessments relating to expectant, new and nursing mothers (and the unborn or breastfeeding child) carried out properly and in good time?

- Do employers provide an appropriate private space for breastfeeding mothers to express milk, and also provide a safe and hygienic place for the milk to be stored?

- Are any special reproductive health concerns of women and men such as work-related issues relating to fertility, menstruation (including providing female sanitary hygiene disposal facilities), menopause, breast cancer or hysterectomy adequately and sensitively addressed?

- Are risks of violence assessed, including concerns about working alone on site or away, or late into the evening, and access to safe parking or transport home?

- Are harassment (including sexual harassment) and bullying treated as health and safety issues?

- Does the employer allow for flexibility with working time, overtime and shift work to accommodate employees' life demands from outside of work, such as family, medical etc.?

- Does the employer recognise stress as a workplace issue and that it may affect different people in different ways?

- Does the employer recognise that domestic violence can become an issue at the workplace and treat the matter as a safety, health and welfare issue which needs to be dealt with sympathetically and practically?

Sickness absence management and investigation

- Does the employer have a sickness absence management policy or workplace agreement that was negotiated with the union?

- Is the policy applied fairly in practice and not used just to cut sickness absence but to fairly address any underlying issues and help recovery with an appropriate return to work?

- Is the sickness absence management policy or workplace agreement fair and non-discriminatory and does it ensure that women are not disadvantaged because of issues relating to menstruation, pregnancy, miscarriage, disability, or the menopause by ensuring that they can be treated separately from other sickness absence?

- Does the policy and practice ensure that any work-related health problems are properly investigated with a review of risk assessments where necessary?

- Do health and safety representatives get regular reports from management on sickness absence, including a gender breakdown?

Reporting and monitoring procedures

- Does the employer ensure all workers are made aware of the importance of reporting injuries, incidents, work-related ill health and health problems made worse by work, in an environment where employees feel they will not be victimised for reporting them?

- Are all injuries, incidents (including near misses) and work-related health problems reported?

- Does data on injuries and ill health include gender and does it differentiate, not only between women and men, but also between different jobs and job levels and between different shift patterns?

- Are trends in the ill-health and sickness absence statistics analysed as well as trends in injuries and near misses?

- Are all injury and ill health statistics systematically reviewed at joint safety committee meetings?

- Where any issue of concern is found from the meetings' deliberations are health concerns given the same priority as safety concerns?

Part 2 – Involving members

In addition to ensuring that your employer protects the health safety and welfare of all the workers, health and safety representatives can look at how they involve and inform members to make sure that their concerns are raised and addressed.

Here are a few ideas:

- Ask members. You could carry out a confidential survey of members' health and safety concerns, but make sure that you can differentiate between men's and women's responses when the responses are analysed.

- Review how you communicate with members. Do all sections of the workforce have access to a health and safety representative, including shift workers, part-time and temporary workers? Are they all consulted about their health and safety concerns?

- Make sure that there are enough women health and safety representatives. Women may have more confidence that their issues are being addressed if there are women representatives and they are included in any joint safety committee.

- Talk about the issue. Make sure that branch meetings or workplace meetings include specific discussions on practical issues that are of concern to women members, or even hold a special meeting on a problem that women workers are facing.

- Work with others. You should make sure that you are reporting regularly to your branch. It is also important to work with other representatives such as stewards, equality women's and learning representatives. If there is more than one union in your workplace then it benefits everyone to work together. And where you have any successes, make sure that your union, and your members know about them.

---

30 Adapted from TUC gender checklist on occupational safety and health – https://www.tuc.org.uk/resource/gender-occupational-safety-and-health

notes

Making women **visible** in occupational health and safety

This resource includes a brief outline of the problem, concerns raised by IUF affiliates, and suggestions on action that can be taken. There is a briefing on do it yourself research including body and hazard mapping, and a checklist of issues which can be considered to help trade union members integrate gender into occupational health and safety.

Ultimately, the only way to mitigate many of these impacts is strong union organization.

For further information, please contact the

IUF Secretariat at iuf@iuf.org

www.iuf.org