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Division of the National Health Laboratory Service

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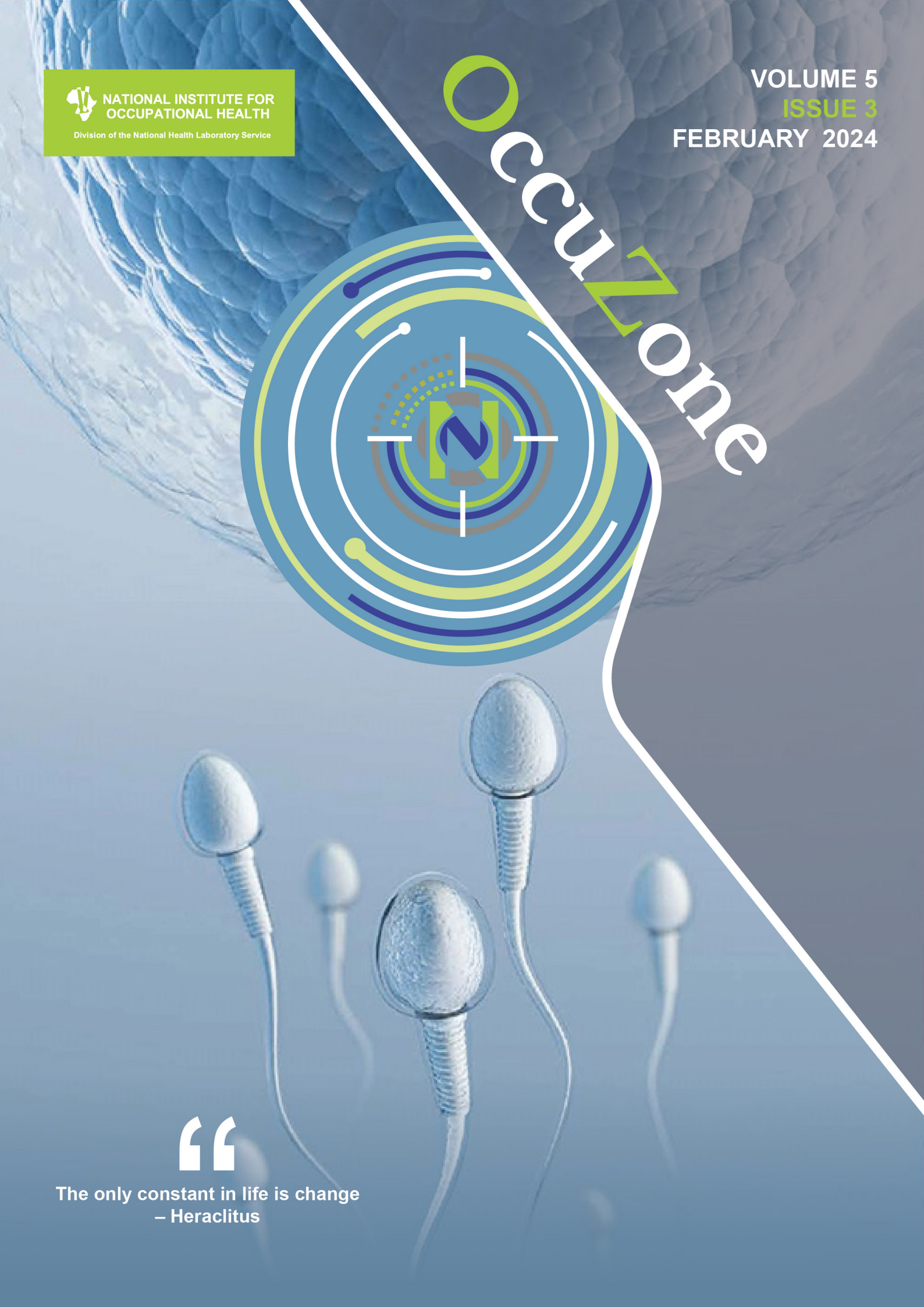

"The only constant in life is change
– Heraclitus

inside
THIS ISSUE

Editorial team: Mr Vuyo Sabani | Prof Nisha Naicker | Dr Kerry Wilson | Ms Zandile Hoyi | Mr Ashraf Ryklief | Mr Msingathi Magwaxaza

NEWSLETTER

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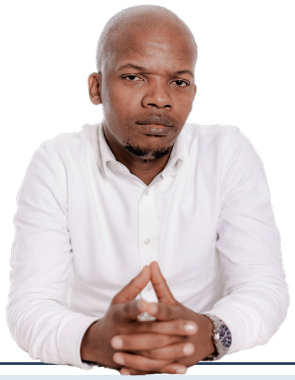

Vuyo Sabani

MESSAGE FROM THE EDITOR

It is rare for people to regard their work as a potential reason for infertility. However, several factors, including risks associated with one's line of work, may influence male and female reproductive capacities. Against this backdrop, we decided to focus on reproductive health in the workplace in this issue.

Reproductive health, also referred to as sexual health/hygiene, covers the processes and functions of the reproductive system during the lifecycle of both men and women. It covers the right of people to be intimate and procreate. For more on this story, see the features section, where the team unpacks reproductive health, shares recommendations for the workplace and many more.

I am pleased to share that we have revised this publication, introduced new features, and removed others. Amongst the new features, the National Institute for Occupational Health (NIOH) Executive Director (ED), Prof Spo Kgalamono, will write a regular column on various occupational health and safety issues. She will share this space with guest columnists. We have replaced the surveillance section with a features and news section. We will still have surveillance reports, but only as a supplement in one issue in a financial year. We have removed the in the Spotlight and Awards and Recognition sections. Furthermore, the length of the research publications has been reduced. We will henceforth include a translated summary of the publication. However, those who wish to immerse themselves in the full article will still get a link or journal details to access the complete transcript. For more on the reasons behind the publication revision, please see the NIOH ED's column.

> **"Reproductive health, also referred to as sexual health/ hygiene.**

Late last year, the National Department of Employment and Labour announced that the Occupational Health and Safety (OHS) Amendment Bill was at the 'tail end'. The Bill will replace the Occupational Health and Safety Act of 1993 when signed into law. The notice to amend the Act was announced in 2021 (See page 18).

In the service delivery section, we profile the NIOH Analytical Services section. The section offers specialised support services to occupational medicine and hygiene. These services include analytical toxicology testing, teaching, and training to undergraduates, postgraduates, intern medical scientists, and the public and private sectors.

We feature infographics from the NEDLAC/NIOH COVID-19 Legacy Programme throughout the publication. To refresh your memory, the NEDLAC/NIOH Legacy Programme produces COVID-19-related occupational health and safety information materials that workplaces can use to educate and inform at all organisational levels. The project is delivered in various formats, such as short videos, infographics and webinars. To view and access resources from the Programme click here: https://www.nioh.ac.za/nioh-nedlac-ohs-programme/
We would be happy to hear your views on the content of this publication; please drop us an email. See details above.

Until the next issue, Cheers!

Prof Spo Kgalamono

MESSAGE FROM THE NIOH EXECUTIVE DIRECTOR

In the ever-evolving world of work, staying informed is not just a choice but a necessity, and the National Institute for Occupational Health (NIOH) recognises the need to adapt to the dynamic requirements of occupational health and safety (OHS) practitioners. That is why we have revised and broadened the scope of this publication. We aim to provide content that will resonate with OHS professionals in both the public and private sectors with informative news features, advice, opinion pieces, and research articles. At the core of these changes is a desire to offer practical advice and information that practitioners can directly apply in their day-to-day activities.

We are positioning this newsletter as a publication of choice for practitioners seeking a blend of research, practical advice, and legislative updates. We know that when there are changes or an introduction of new regulations in the workplace, OHS practitioners are among the key stakeholders workers consult for more information.

We have added new features that will add more value to OHS professionals' information arsenal. One of those new features I am excited about is the introduction of a legislative update article, which will keep colleagues up-to-date about new laws and regulations. This will ensure OHS professionals are equipped to navigate the evolving regulatory landscape. In this issue, we discuss the Occupational Health and Safety Amendment Bill. According to the Department of Labour and Employment, the Bill, which is currently with state law advisors and the Presidency for review, will replace the OHS Act of 1993.

The publication will also feature experts in the field of OHS sharing best practices and advice. Watch this space for more details. The NIOH provides various services and resources. I encourage OHS professionals to use these services and training resources fully. For a complete list, see the back pages of this issue. Our aim is to ensure OHS professionals receive information and access resources to enhance their effectiveness in their respective fields. This is in line with the NIOH mission to promote healthy, safe and sustainable workplaces through cutting-edge research, specialised service delivery and teaching and training activities.

> "This is in line with the NIOH mission to promote healthy, safe and sustainable workplaces.

The revamp of this publication is a work in progress, so I invite the OHS community to come on board and work with us as we position this quarterly newsletter. We want to share content that resonates with the broader OHS community; however, we can only do that through engagement and feedback. So please write to us, subscribe to the publication, circulate it to your colleagues and associates, and spread the word.

Until next time, God Bless!

Prof Nisha Naicker

RESEARCH FOCUS

Occupational health research is one of the institute's primary functions. All scientists at the NIOH perform various research activities as principal investigators or collaborators on self-initiated projects or commissioned projects from the private sector, parastatal and government organisations, as well as international organisations.

The Epidemiology and Surveillance section has, over the last five years, initiated projects on working conditions and health outcomes in informal and precarious workers. One such project is a three-year multicentre longitudinal study funded by the National Research Foundation (NRF). The study aims to determine the effects of exposure to air contaminants on the health of petrol pump attendants (PA), and apply a simple intervention to improve health outcomes associated with work-related exposure in the PAs in Johannesburg, South Africa.

Exposures at the workplace can be potentially harmful to health and can be prevented. Occupational-related air pollution within the petrochemical industry is associated with known respiratory health as well as haematological and carcinogenic effects. Petrol pump attendants are exposed to air contaminants, which consist of a mixture of natural and anthropogenic sources, such as transportation, biomass burning, fuels used for heating and cooking (Unger et al., 2010). In addition, petrol pump attendants are at risk of occupational exposures to harmful substances through inhalation and dermal routes of entry: inhaling petrol or diesel vapour during refuelling or using petrol as a degreaser when washing hands, as well as accidental splashes. Occupational exposure to common air contaminants due to petrol and diesel are sulphur dioxide, nitrogen dioxide, ozone, carbon monoxide, heavy metals, particulate matter (PM10) and benzene, toluene, ethylbenzene, xylene components (BTEX) which are surrogates for whole fuel (Department of Environmental Affairs, 2007).

PA's are outdoor workers and many outdoor workers are precarious workers or form part of the informal economy. These workers are often socioeconomically deprived and are more likely to have increased indoor air pollution for example exposure to second-hand smoke and the use of fossil fuel for heating and cooking. Petrol attendants may also have minimal occupational health services (if at all) at the workplace and have limited access to health care services in the public sector due to the nature of their work, for example shift work (Pembroke et al. 2022).

All workers, including those working outdoors, should enjoy the right to favourable working conditions and to the highest attainable standard of physical and mental health. Decent work means also being able to breathe clean air at work. Such occupations require regular monitoring and surveillance to ensure that safety practices or measures are put in place for the protection of the people in that workplace environment (Coulson, et al., 2008).

There is limited information on the health of petrol pump attendants exposed to workplace air contaminants in South Africa. This study aims to generate new knowledge by achieving a greater understanding of the nature and depth of potential health risks and health outcomes posed to petrol pump attendants occupationally exposed to air contaminants. The intervention arm of the study will provide information on possible effective measures to reduce exposure and or information on the role of antioxidant supplementation in the reduction of the effects of exposure.

See page 6 for references.

References:

Coulson, S., Morgan-Smith, R., Mitchell, S. & Mcbriar, T., 2008. An Investigation into the presence of petrol on the clothing and shoes of members of the public. Forensic Science International, 4454

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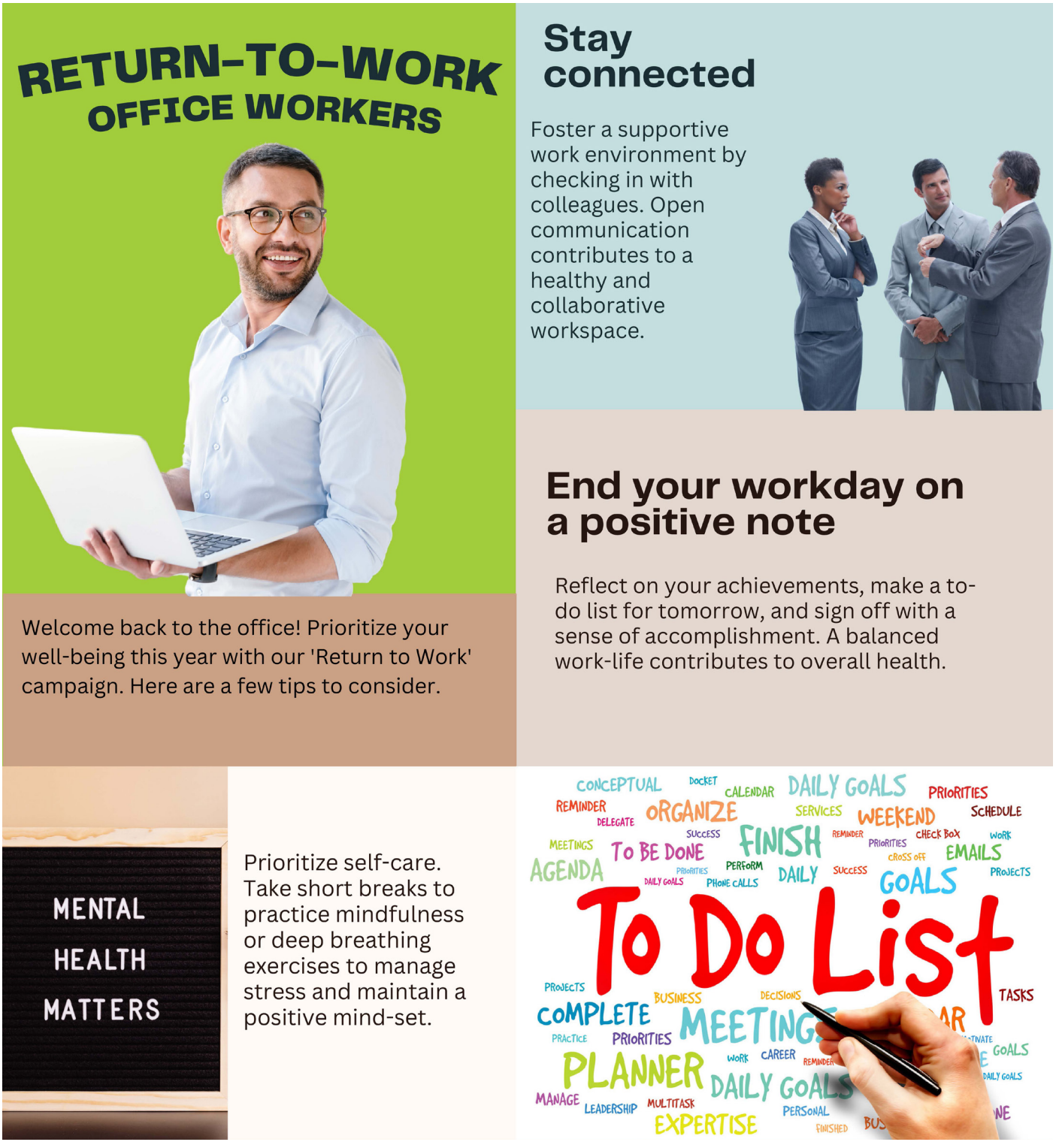


Stay hydrated

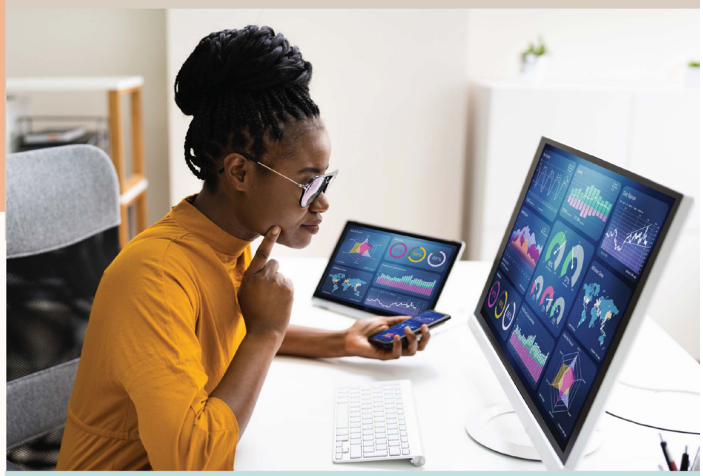
Take breaks, stay hydrated, and practice good ergonomics for a healthier work routine.

Ergonomic office workspace

Adjust your chair, monitor, and keyboard to support good posture and reduce strain. A comfortable workspace contributes to long-term occupational health.

Screen time awareness

Practice the '20-20-20' rule – every 20 minutes, look at something 20 feet (6 meters) away for at least 20 seconds. Protect your eyes and maintain focus throughout the day.



Healthy snacks for productivity

Fuel your day with nutritious snacks to keep energy levels stable. Choose options like nuts, fruits, and veggies for sustained concentration.

Mindful meetings

Encourage walking meetings or standing breaks to foster a dynamic and health-conscious work environment.

RESEARCH PUBLICATIONS

Sharing of research benefits when South African researchers are in partnership with overseas researchers

Author(s): Maseme, M.

Source: Afr.J.Bio.Sc. 2023:5(3):1-14

Summary: This paper discusses problems that have not yet been solved when it comes to sharing of research benefits. There are different ideas on how sharing of research benefits should be done and this means that a common ground on how this should be done is needed. It is therefore necessary to investigate if there are enough materials for carrying out research in South Africa. This information will help in making decisions on what benefits of research should be shared when human samples are shared by South African researchers with overseas researchers. The topic of how sharing of benefits when South African human samples are shared with researchers outside the country has not been discussed fully in South Africa. This is why it is important to know how this has been done in other places. Everyone involved in the research, including community members and researchers should benefit from the research. These benefits should include strengthening research ability of local researchers, providing support for research materials and buildings as well as benefits for communities that are taking part without using human samples in a way that is wrong.

Permission for future research use of human samples in South Africa: Moving towards less strict laws

Author(s): Maseme, M., Gardner, J., and Mahomed, S.

Source: Global Bioethics. https://www.tandfonline.com/doi/full/10.1080/11287462.2023.2288331

Summary: The South African Department of Health's rules for carrying out research responsibly allow researchers to obtain permission for using human samples for research in the future. Permission for future research use of samples however does not seem to be allowed by section 13 of the Protection of Personal Information Act 4 of 2013 (POPIA). This is because this law makes it compulsory for all personal information (including information for human samples stored in a biobank) to be collected for reasons that are lawful, direct (specific) and clear. Biobanks are institutions that store samples and the information related to those samples to enable researchers to carry out research in the future. This means that because biobanks store samples for research that will be done in the future, researchers cannot give those that have donated the samples and taking part in the research a lot of information or specific information because it is simply not available when samples are collected. The differences in these two laws in how personal information should be used can lead to different ways in which people interpret them. In summary, this paper suggests changes for the two south African laws that clash on permission for collecting human samples for future research, at the same time protecting the rights of those that take part in the research.

Diabetes mellitus mortality by major occupation category in South Africa, 2009-2016

Author(s): Chitaka, A., Zwane, T., Kuonza, L., Naicker, N., Tlotleng, N., Wilson, K.

Source: Public Health Bulletin South Africa. 2023. 20(1). https://www.phbsa.ac.za/wp-content/uploads/2023/10/Diabetes-mellitus-in-South-Africa-2009-2016-Naicker.pdf

Summary: In South Africa, diabetes mellitus (DM) is an escalating non-communicable disease (NCD) and a leading cause of death. This study aimed to identify occupations associated with increased risk of DM mortality. Participants aged 16—70 years whose underlying cause of death was DM were included in this cross-sectional study using Statistics South Africa (StatsSA) mortality data. Deaths from diabetes accounted for 184 080 (4.44%) of 4 147 326 total deaths for the period 2009—2016. In the analyses, the deaths due to DM increased significantly between 2009 and 2016. All major occupation groups had a higher risk of DM-associated mortality compared to the reference occupation group (skilled agricultural and fishery workers). Thus workers in all occupations are at comparatively high risk of diabetes mellitus mortality in South Africa. Specific risk factors include diet, sedentary work and lifestyle, and the causes of stress and reduced mental health. Diabetes mellitus morbidity likely affects productivity leading to adverse impacts on individuals, businesses and the economy. Interventions and preventative measures (policies and awareness) are therefore indicated in all workplaces irrespective of the occupational group.

We recommend that workplaces provide:

• Access to, and education on, healthy food options;

• Policies and practices to alleviate long hours of sedentary work by encouraging periodic physical activity within a safe working environment.

Systematizing Information Use to Address Determinants of Health Worker Health in South Africa: A Cross-sectional Mixed Method Study

Author(s): Zungu, M., Yassi, A., Ramodike, J., Voyi, K., Lockhard, K., Jones, D., Kgalamono, S., Thunzi, N., Spiegel, J.

Source: Saf Health Work 2023; 14:368-374

Summary: This paper was motivated by the recognition that access to safe and healthy working conditions is a human right, health workers (HWs) needed specific occupational safety and health (OSH) programs, and that both ILO and WHO highlighted the importance of information (occupational health) for resilient health systems.

Our cross sectional study in four hospitals examined how OSH stakeholders access, use, and value an occupational health information and systems. The study hospitals and participants were purposefully selected and data collected using a questionnaire with both closed and open-ended questions. The participants comprised of hospital managers, health and safety representatives, trade unions representatives and OSH professionals.

Our main findings included that there was:

• Poor access and timeliness to occupational health information for decision-making;

• HWs had limited access to computers and some lacked computer skills;

• Occupational health information systems were poorly organised and needed significant reforms.

• Less than 50% of use occupational information for decision-making.

Given the gap in access and utilisation of occupational health information and systems we recommend that National Institute for Occupational Health (NIOH), lead advocacy efforts for strengthening the use and implementation of occupational health information and systems in health settings.

Wind-driven roof turbines' effectiveness in enhancing household ventilation: A potential tool to reduce tuberculosis infection

Author(s): Mutava, E., **Singh, T**., Brouwer, D.

Source: Occup Health Southern Afr. 2023; 29(3):132-136

Background: South Africa's overburdened healthcare systems have led to criticism of its unsustainable tuberculosis management interventions. In 2011, the National Department of Health implemented an outpatient, decentralised care model, but this increased costs and jeopardised the long-term viability of prevention measures. Home confinement is now recognised as a viable intervention option, when combined with safety precautions such as ventilation and medical support. However, little is known about the risk of infection in this context.

Objectives: To assess the effectiveness of wind-driven roof turbines in enhancing ventilation and their potential to lower the risk of Mycobacterium tuberculosis infection in a residential setting.

Methods: Eight houses were selected and divided equally into intervention (wind turbines installed) and control groups, using a pairwise comparison method. The CO 2 decay method was used as a proxy to determine ventilation in the houses. The wind-driven roof turbines' potential to lower the risk of Mycobacterium tuberculosis infection was stochastically evaluated using the Wells-Riley mathematical model.

Results: During two seasons, installation of a roof turbine resulted in twofold ventilation rates compared to the control houses. Consequently, the Wells-Riley model predicted a twofold reduction in the probability of infection in the intervention compared to the control households.

Conclusion: Low-cost, low-maintenance wind-driven roof turbines are effective in increasing ventilation in houses, and should be considered as an additional layer of protection against Mycobacterium tuberculosis and other infections in residential settings.

Navigating the complexities of mould exposure in damp building: A case report on challenges and potential solution

Author(s): Matuka, O.D., Ratshikhopha, E., Muvhali, M., Muleba, L., Singh, T.

Source: Current Allergy & Clinical Immunology. December 2023; Vol 36, No.4

Summary: The increasing presence of moulds in workplaces poses significant occupational health risks, particularly in poorly maintained structures. It is imperative to understand mould-related health effects and remediation strategies to ensure a safe and healthy work environment. This case investigation aimed to establish an association between employee symptoms and moulds in a damp building. An environmental assessment was undertaken to identify visible signs of water damage and identify mould species in air and surface samples. Information on mould exposure, building-related symptoms and predisposing factors was gathered through an online self-administered questionnaire. Blood samples were collected from complainants and non-complainants to determine possible allergy to moulds. The walkthrough revealed water-damaged walls, visible mould growth and suboptimal maintenance of the plumbing system, and from samples that were taken, environmental mould species were identified.The most common symptom reported was headache, followed by a pressing sensation on the scalp, a lack of concentration and fatigue. The allergy tests yielded negative results for all workers except one positive for a single mould species. One of the identified moulds was linked to exposure. This case highlights the importance of employing appropriate serological tools to investigate mould exposure. Furthermore, it underscores the challenge of interpreting laboratory results without standardised reference values, which may have an impact on accurate diagnosis and case management. The investigation also raises awareness of effective case management to prevent adverse health effects related to mould sensitisation in occupational settings.

Allergic contact hand dermatitis due to constituents of nitrile gloves

Author(s): Fourie, A., Carman, H.A., Ndaba, N., Rees, D.

Source: Occup Health Southern Afr. 2023; 29(4):174-179

Summary: A laboratory analyst had occupational exposure to laboratory chemicals and powered ore dust containing precious metals and she wore rubber gloves. She developed hand dermatitis and was relocated to administrative duties not requiring glove use. Her dermatitis cleared but recurred when she returned to the laboratory and started using nitrile gloves. On history, nitrile gloves and platinum group metal (PGM) ore dust were consistently associated with her hand dermatitis. She was shown not to be allergic to latex, or to any of the 13 relevant metal substances with which she was skin patch tested, including salts of PGMs. She had positive reactions to cobalt chloride, nickel sulphate and 2 preservatives, but not to the rubber chemicals (including the thiuram mix) in the European standard series patch tests. The patient was tested with a rubber additive series because she felt strongly that the use gloves was closely related to the flaring of her hand dermatitis. She had positive reactions to three thiuram compounds used as accelerators in rubber gloves. When the patient went on vacation her dermatitis improved. She was relocated to a position without glove use or ore contact and her dermatitis did not recur.

International Society for Biological and Environmental Repositories (ISBER) Best Practices: Recommendations for Repositories 5th Edition

Author(s): Maseme, M.

Source: https://www.isber.org/page/BP5Downloaded

Summary: Recommendations for repositories reflects the substantial contributions of and reviews by repository professionals from diverse organisations worldwide in response to invaluable feedback provided by users of the previous editions. Representing the spectrum of human, biodiversity, environmental, and veterinary repositories, each of these dedicated individuals have shaped this edition through their expertise and commitment. These Best Practices are reviewed periodically and revised to incorporate improved application and research findings that would affect repository work.

Pregnant worker and worried about TB and COVID-19

Pregnant and breastfeeding women may be exposed to diseases such as TB and COVID-19 which are passed from person to person through the air including at work. TB and COVID-19 in particular, can lead to various complications for the pregnant woman, foetus and the newborn (including breastfeeding implications) if the workplace does not have control measures and the pregnant worker is left untreated as indicated below:

Untreated TB and COVID-19 disease represents a greater hazard to a pregnant woman and her foetus. Pregnant woman who has COVID-19 and or TB is more likely to have severe diseases and deliver prematurely.

Infants born to women with untreated TB or COVID-19 may be of lower birth weight and, in rare circumstances the infant may be born with TB or COVID-19. Most information shows that it is safe to feed breast milk to your baby when you have COVID-19 or TB. Remember that breast milk is the best source of nutrition for babies.

The workplace should assess the risk associated with exposure to COVID-19 and TB. Employers should implement the controls in line with the risk assessment and provide education and training to pregnant workers.

FEATURES AND NEWS

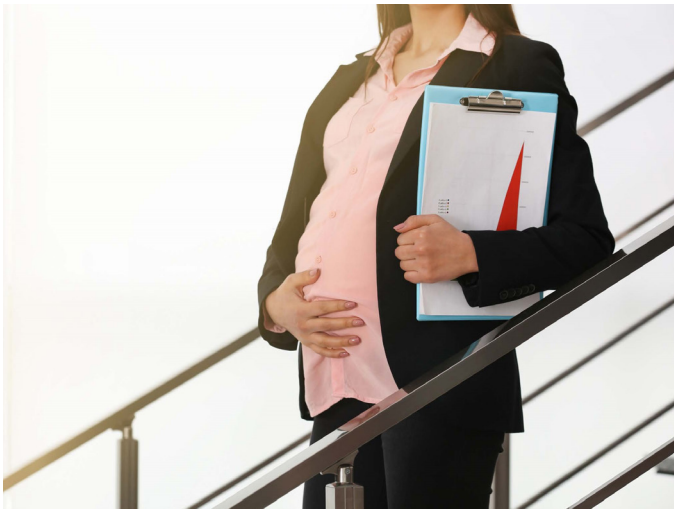
REPRODUCTIVE HEALTH IN THE WORKPLACE
NURTURING THE WORKPLACE

Reproductive health also referred to as sexual health/hygiene, covers the processes and functions of the reproductive system during the lifecycle of both men and women. It covers the right of people to have a safe sex life and the ability to reproduce if they wish.

What is Occupational Reproductive Health?
This is the identification, study and control of workplace exposures that can have an impact on the reproductive systems of men and women. Many things can affect one's ability to have healthy children, but also can affect one's reproductive systems in other ways such as abnormal menstruation, reduced spermatogenesis, hormone imbalances, and cancer of the reproductive system. Workplace hazards can affect the ability to become pregnant, the health of unborn children, and child development, and may also cause other health problems in one.

In the past, toxic reproductive effects have not been of significant concern in setting standards for hazardous exposures. Standards, such as Threshold Limit Values (TLVs), rarely provide adequate guidance on reproductive health. The same limitation is often found with regulated Occupational Exposure Limits (OELs) (these standards are more commonly based upon exposure to the average non-pregnant worker). Therefore, evaluating and caring for the worker's reproductive health may require an individualised approach. Industrial hygiensts, Ergonomists, Occupational Medicine physicians and obstetrical practitioners may need to be involved in a combined effort to determine risk.

Reproductive hazards are also often hazardous to other biological systems and a disruption of the reproductive system may predict other effects with continued exposure. Monitoring reproductive health may be an early biomarker for hazardous exposures. Reproductive health is a right and thus should be afforded the same protection as other more well recognised body systems.



What are reproductive hazards?
Reproductive hazards are physical exposures (including ergonomic related factors), chemical substances and biological agents that may affect the reproductive health of women or men, or the ability of couples to have healthy children. Examples of reproductive hazards are lead, heat and cold, radiation, prolonged standing, heavy lifting and viruses.

Chemical Hazards are substances or agents present in the workplace either used in production or produced as result or work activities such as heavy metals, dusts, fumes and chemical substances.

Biological Hazards include many bacteria, viruses, moulds, biological specimens, and products of those organisms. The hazards may not necessarily

be used or produced in the workplace but can result from damp conditions or poor hygiene.

Physical hazards are those present in the workplace such as environmental conditions, ergonomic-related factors such as shift work and posture at work and radiation.

Physical ergonomics -- designing workspaces to optimize human well-being, and performance and reduce discomfort. Consider adjustable desks and chairs, enabling employees to customise their environment. Encourage regular breaks to alleviate prolonged periods of sitting and/or standing, promote better blood circulation through movement of the body and reduce musculoskeletal strain.

The cognitive aspect of ergonomics is equally crucial. Implementing strategies to manage stress and workload can positively impact reproductive health. Promote a healthy work-life balance, provide resources for stress management, and foster open communication to create a mentally supportive workplace.

Organisational ergonomics involves optimising work processes and structures. Establish clear policies on family planning, maternity, and paternity leave. Encourage flexibility in work hours and locations, allowing employees to balance professional commitments with personal needs during critical periods of their reproductive journey.

Listed below are some of the workplace risk factors for Reproductive Health.

- Adoption of poor posture: ill-designed workstations lead to prolonged periods of poor posture which can contribute to musculoskeletal discomfort and impact reproductive health.

- Sedentary work: extended periods of sitting may hinder blood circulation, potentially affect reproductive organs and contribute to overall discomfort.
- Excessive physical strain: jobs involving heavy lifting or repetitive, strenuous physical activities may increase risk of injuries and negatively impact reproductive health. There are also jobs with risk of physical injury like working at height, or alone. Risk of workplace violence should be taken into account.
- Vibration exposure: occupations with prolonged exposure to vibrations, such as driving heavy machinery, may pose a risk to reproductive health in both men and women.
- Work stress: high levels of stress, whether physical or emotional, may contribute to hormonal imbalances, potentially affecting reproductive health for both men and women.
- Inadequate breaks: insufficient breaks or a lack of opportunities for movement during the workday can contribute to physical discomfort and impact overall well-being.
- Shift work: irregular or night-shift work schedules can disrupt circadian rhythms, potentially affecting reproductive hormones and fertility.
- Poor environmental conditions: such as poor lighting, extreme temperatures, exposure to poor air quality, radiation, etc. may adversely affect fertility and pose risk during pregnancy.
- Limited flexibility: Workplaces that lack flexibility in terms of work hours or locations may contribute to stress, making it challenging for employees to balance work and personal life, including family planning.
- Hazard exposure: Workplaces are the source of many exposures that may harm reproductive health or the developing foetus. Hazards like chemicals, heavy metals, fumes and dusts along with biological hazards like bacteria, viruses and toxins.
- Personal Protective Equipment: PPE is not usually designed for pregnant workers and thus may cause harm or give a false sense of protection.

Recommendations for workplaces

1. Comprehensive education: Conduct regular training sessions on reproductive health and ergonomics, ensuring employees are aware of potential risks and preventive measures.
2. Flexible policies: Establish policies that support family planning, parental leave, and flexible work arrangements, promoting a healthy work-life integration.

3. Risk Assessments: Conduct assessments for ergonomic hazards such as workstations and work tasks, as well as risk assessments for other hazards such as chemical and biological exposures. Addressing the unique needs of each employee and making necessary adjustments to enhance health, safety and will maintain reproductive health and pregnancy.

4. Health and Wellness Programs: Implement wellness programs that focus on stress management, exercise, and overall well-being to support the holistic health of employees.

5. Regular Check-ins: Encourage open communication and provide opportunities for employees to discuss any concerns related to reproductive health or health and safety needs.

Recommendations for workers

1. Be aware: Ask your employer or your company's safety officer about the types of hazards for your specific job tasks and how you can stay safe while doing your job. If the company has done testing to identify workplace hazards your employer is required to provide a copy of the results if you request them. If you work with chemicals, your employer should have Material Safety Data Sheets (MSDS) available for all employees to read. These will include information on reproductive toxicity.

2. Few doctors or midwives remember to ask you about your job. If you are concerned about your work, or if you and your partner are trying to become pregnant. Tell your doctor: about the kind of work you do, the hazards are in your workplace and If there is anything specific you have questions about. Ask your doctor or occupational hygienist if there is anything in your job you should be avoiding during pregnancy or breastfeeding.

3. You may also accidentally bring work hazards home with you. Chemicals can come home on your skin, hair, clothes, and shoes, and they can contaminate your car and home. Keep healthy if you work with chemicals by changing clothes and showering before leaving work, keeping work clothes out of the living areas of the house, and washing work clothes in separate laundry loads from the family's clothes.

4. Follow all safe work guidelines or protocols in your workplace, even if your tasks take a little longer.
If your employer offers health and safety training, take part.

What are worker's rights in relation to occupational reproductive health?

1. Code of good practice on protection for pregnant employees' states:

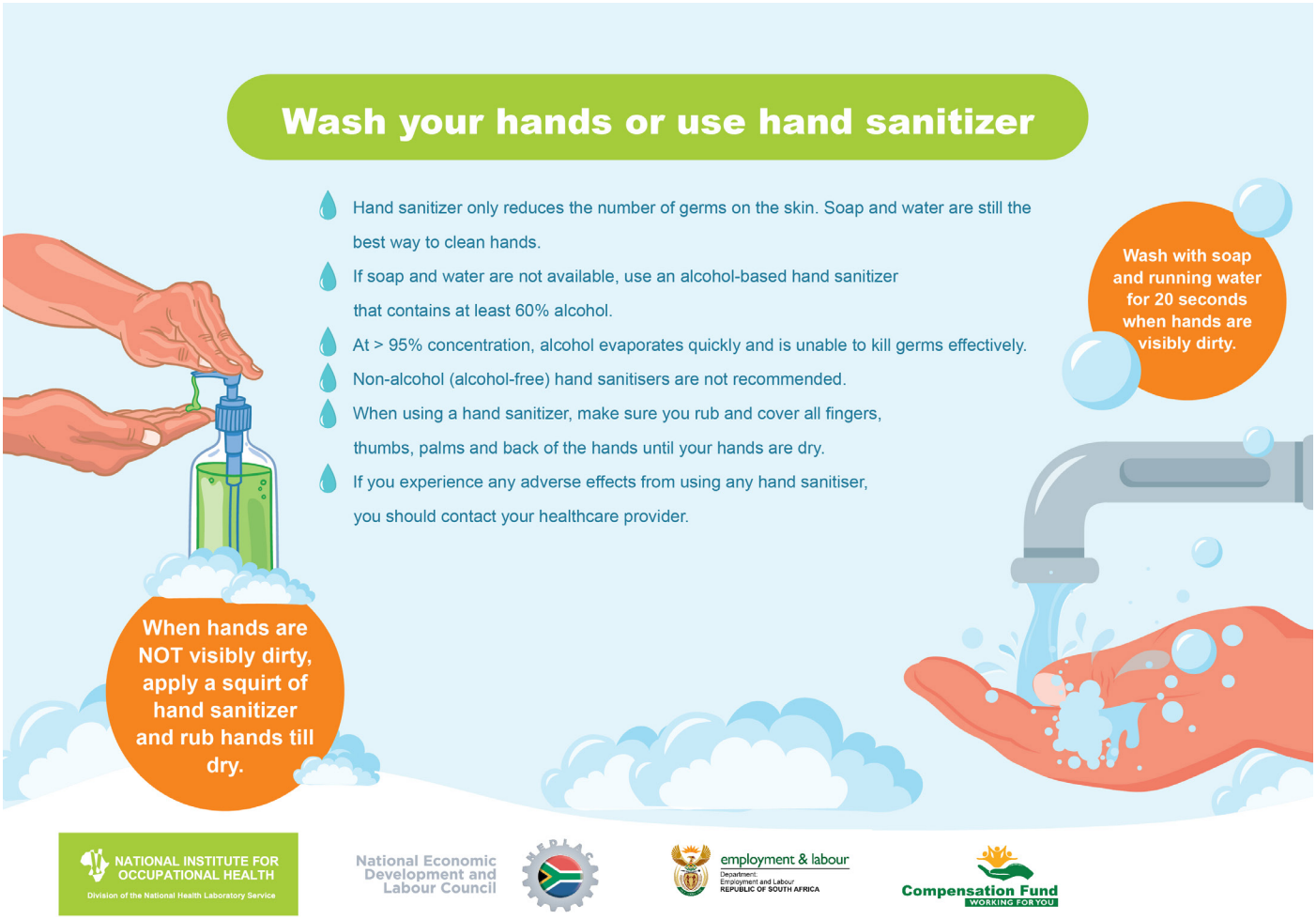
- The Constitution protects the right to bodily and psychological integrity, which includes the right to make decisions concerning reproduction [section 12(2)] and gives every person the right to health services, including reproductive health care [section 27(1)(a)].
- No person may be discriminated against or dismissed on account of pregnancy.
- Employers are required to provide and maintain a work environment that is safe and without risk to the health of employees. This includes risks to the reproductive health of employees. These duties are established in terms of both the Occupational Health and Safety Act (OHSA) 85 of 1993 and the Mine Health and Safety Act (MHSA) 27 of 1996.
- When an employee notifies an employer that she is pregnant her situation in the workplace should be evaluated. The evaluation should include:
  - an examination of the employee's physical condition by a qualified medical professional;
  - the employee's job; and exposures;
  - workplace practices and potential workplace exposures that may affect the employee.
- Employers and employees should be aware of the following common aspects of pregnancy that may affect work:
  - As a result of morning sickness employees may be unable to perform early shift work. Exposure to nauseating smells may also aggravate morning sickness.

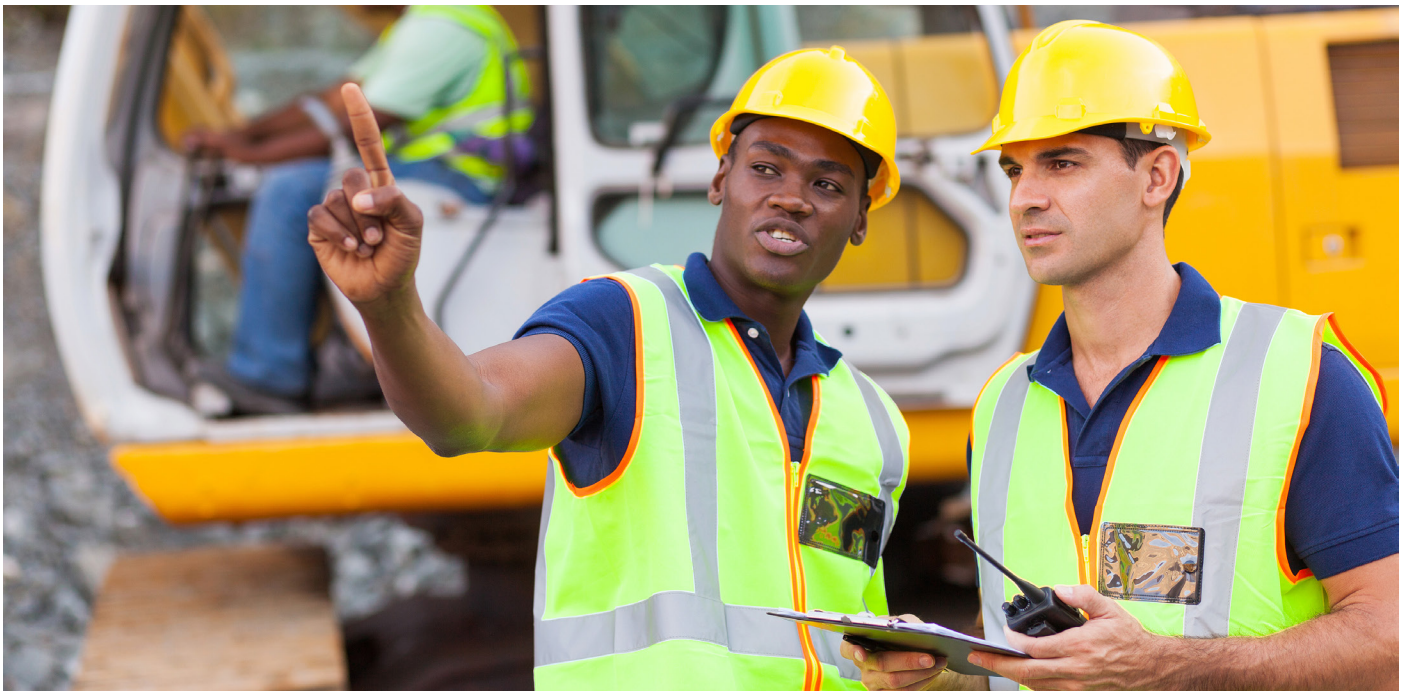
- Backache and varicose veins may result from work involving prolonged standing or sitting. Backache may also result from work involving manual handling.
- More frequent visits to the toilet will require reasonable access to toilet facilities and consideration of the employee's position if leaving the work, she performs unattended poses difficulties.
- The employee's increasing size and discomfort may require changes of protective clothing, changes to work in confined spaces and changes to her work where manual handling is involved. Her increasing size may also impair dexterity, agility, co-ordination, speed of movement and reach.
- The employee's balance may be affected making work on slippery or wet surfaces difficult. Tiredness associated with pregnancy may affect the employee's ability to work overtime and to perform evening work. The employer may have to consider granting rest periods.

2. Basic conditions of employment Act 11 of 2002 states:

- Four months' consecutive maternity leave is allowed.
- No employee may work for six weeks after birth
- The act provides rights for employees before and after the birth of a child:
  - No employer may expose a pregnant or nursing employee to hazards to her child's health.
  - During pregnancy and six months after the employer must place her in a safe environment at no change in remuneration
  - An employer must grant three days' family responsibility leave each year.

Fostering a workplace that prioritises reproductive health and worker well-being is an investment in the long-term success and engagement of your workforce. By addressing these aspects comprehensively, organisations can create environments where employees can thrive both professionally and personally.





SOUTH AFRICA TO HAVE A NEW OCCUPATIONAL HEALTH AND SAFETY LAW SOON

The Occupational Health and Safety (OHS) Amendment Bill, which seeks to amend the OHS Act of 1993, is at the finalisation stage, according to the Department of Employment and Labour (Department). In February, the Chief Inspector at the Department, Ms Milly Ruiters, informed OccuZone that the Bill was with the state law advisors and the Presidency for review, after which it would go through the parliamentary processes.

The notice to amend the OHS Act was published in May 2021. In summary, the Bill aims to amend the Act of 1993 so as to delete, substitute, and insert certain definitions; to effect certain technical corrections; to make further provisions in respect of the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; to further regulate the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to further regulate the composition of an advisory council for Occupational Health and Safety.

The most significant change introduced by the Bill is the requirement for businesses to establish a health and safety management system in order to standardise workplace health and safety practices. This modification pertains to Section 7 of the OHS Act, which presently has a narrow scope, encompassing only a health and safety policy.

As per the updated definitions put out by the Bill, a health and safety management system refers to a well-coordinated and comprehensive collection of interconnected pieces that are designed to develop policies and objectives for occupational health and safety. The purpose of this system is to manage and optimise health and safety effectively.

This implies that firms must establish health and safety practices by implementing rules, setting objectives, and utilising monitoring methods. Furthermore, Section 8 of the Act will now mandate the creation of a documented risk assessment and risk management plan. This is distinct from the health and safety management system.

“There [are] still high levels of non-compliance; therefore, there is room for improvement by employers. Non-compliance put[s] the health and safety of workers and those that are affected by an employer and employee relationship at risk. There are consequences that include enforcement. Employers should proactively prevent injuries and diseases through health and safety management systems,” said Ms Ruiters.

Once the review process is complete, the Bill will undergo parliamentary processes before it is signed into law by the president.

SERVICE DELIVERY

ANALYTICAL SERVICES SECTION

The NIOH comprises a multidisciplinary cohort that offers specialised services in relation to occupational health through its sections. The Analytical Services section offers specialised support services in the practice of occupational medicine and hygiene. These services are in the form of analytical toxicology testing and teaching and training to undergraduates, postgraduates, intern medical scientists, and the public and private sectors.

Analytical Services section staff and students.

The section offers the measurement of selected chemical contaminants from environmental and biological samples collected from various workplaces. Analytical services provides analysis of workplace contaminants in biological and environmental samples for toxic metals, organic substances, and persistent organic pollutants. Examples of organic substances tested include benzene, toluene, ethyl benzene, and xylene (BTEX), which are some of the most common solvents used in occupational settings throughout various industries such as mining, petrochemicals, glue, rubber, plastic, pathology services, etc. Some of the toxic metals tested are mercury, arsenic, cadmium, chromium, lead, and manganese. The full scope of tests offered by Analytical Services is available on the NIOH website. New tests are being developed as demand requires, and if one requires a test that does not appear in the list provided, please inquire with one of the contacts below.

Additional services of the section

Analytical Services is accredited by the Health Professions Council of South Africa (HPCSA) as a training facility for medical scientists in the field of Clinical Biochemistry. An additional function of the section is to contribute to research and health hazard evaluations and to provide training to under- and post-graduate students. Teaching and training provided include, among others, applied chemistry in occupational health and toxicology analysis.

Consultation

The section offers technical advice to local and international entities about environmental management and the implementation of a total quality management system (e.g., chemical waste management, choice of appropriate tests, and sample collection). Through accreditation with the South African National Accreditation System (SANAS), section operate within the ISO 15189 and ISO/IEC 17025. The NIOH takes pride in being the institute with the only laboratory of its kind in the public sector in the Sub-Saharan Africa.

The regulations for hazardous chemical agents are designed to ensure that employees are informed of the hazards associated with exposure to hazardous chemicals used in their workplace. The provisions of these regulations apply in workplaces that carry out work that may expose any person to any chemical agent hazardous to their health. Such workplaces are by law required to do periodic assessments to determine if any employee may be exposed to any hazardous chemical agent by any route of intake and, if necessary, carry out monitoring following the provisions of these regulations. Analytical Services assists such workplaces to comply with provisions of the regulations for hazardous chemical agents in monitoring and assessment of their workers and work environment by carrying out analysis of biological and environmental samples to determine the presence of toxic chemical substances.

The Analytical Services section offers services to a wide range of stakeholders requiring analytical chemistry testing in occupational hygiene, biological monitoring, and some clinical laboratory tests. Most of our clients include companies, government departments, and clinicians. The analysis of workplace contaminants in biological and environmental samples for toxic chemical substances are at a reduced cost regulated by the government. Request a quote for testing from one of the contacts indicated below.

For more information, please inquire with one of the contacts below:

Head of Section

Dr. Boitumelo Kgarebe
Tel: +27(0)11-712-6410
Fax: +27(0)11-712-6533
E-mail: boitumelok@nioh.ac.za

Organics Laboratory

Dr. Puleng Matatiele
Tel: +27(0)11-712-6477
Fax: +27(0)11-712-6533
E-mail: pulengm@nioh.ac.za

Metals Laboratory

Mr. Poobalan Poongavanum
Tel: +27(0)11-712-6414
Fax: +27(0)11-712-6533
E-mail: poobalanp@nioh.ac.za

TEACHING AND TRAINING

The training offered by the NIOH strives to promote development of the work environment, work communities and organizations, to enhance management of changes, and to further occupational health and expertise. This training is informal and usually done in a short course format. The NIOH also provides tailored training upon request.

NIOH's Immunology & Microbiology Section training workshops for 2024
For training workshop enquiries, contact the Acting Head of the Section, Ms Muofhe Edith Ratshikhopha, at (Edithr@nioh.ac.za).

No	Activity	Date	Target Audience	Format	Venue	CPD/ Ethics application
1.	Bio-risk Management Workshop Training on biohazard risks in workplaces.	9 – 13 September 2024	Occupational health officers, researchers, academics	Hybrid/	NIOH Offices/ online	CPD
2.	Waterborne pathogens and the world of work. Training on exposure to waterborne pathogens in workplaces	3-4 October	Facility managers; EHPs; wastewater treatment plant workers; laboratory staff; plumbing & maintenance staff; researchers; & academics	Hybrid	NIOH Office / online	CPD
3.	Occupational allergy workshop	November (TBC) The date will communicated through the NIOH website	Occupational health nurses	Northern Cape	TBC	CPD

NINIOH Occupational Hygiene Section training workshops for 2024
The Occupational Section will provide the following training workshops. For more information, you may contact the Head of the Occupational Hygiene Section, Dr Jeanneth Manganyi (jeannethm@nioh.ac.za) or Mrs Karen du Preez (Karend@nioh.ac.za)

No	Activity	Date	Target Audience	Format	Venue	CPD/ Ethics application
1.	Occupational Hygiene Training Association (OHTA) Modules: OHTA201 Basic principles in Occupational Hygiene	12-16 February 2024	Occupational hygiene students, or persons involved with management of occupational health issues in the workplace	Online or in-person	NIOH / Online	N/A
2.	Southern African Institute for Occupational Hygiene (SAIOH) approved modules: AP101: The analysis of airborne asbestos fibres using phase contrast microscopy	08-11 April 2024	Occupational hygiene students or practitioners, or asbestos analysts	In-person	NIOH	N/A
3.	OHTA Modules: OHTA501 Measurement of Hazardous Substances	8-12 July 2024	Occupational hygiene students or practitioners	In-person	NIOH	N/A
4.	OHTA Modules: OHTA507 Health Effects of Hazardous Substances	04-08 November 2024	Occupational hygiene students or practitioners	In-person	NIOH	N/A
5.	OHTA Modules: OHTA507 Health Effects of Hazardous Substances	10-14 February 2025	Occupational hygiene students or practitioners	In-person	NIOH	N/A

Health and Safety Committees

Health and Safety Committees (HSC) are critical for a workplace as they make recommendations to the employer regarding the health and safety of the workers.

What you need to know about HSC

- A HSC is legally required where two or more Health and Safety Representatives (HSR) have been appointed.
- All appointed HSR are members of the HSC.
- The employer must also be part of the HSC.
- The HSC may co-opt persons from the workplace with specific health and safety knowledge as advisory members.
- The HSC must meet at least once every three months.
- The HSC should make health and safety recommendations to the employer.
- Records of such recommendations must be kept.

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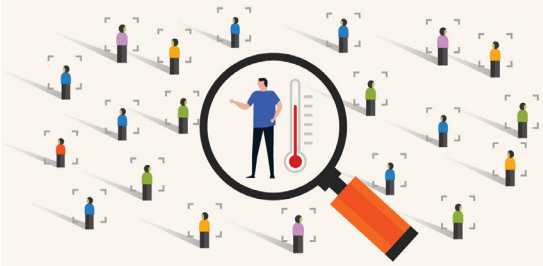
Public Health Surveillance in the Workplace

What is Health Surveillance?

Surveillance is the collection of regular (monthly, biannually, annually...) health information of workers.



Why do we need health surveillance?

To improve the health and working conditions of employees.

How do you perform health surveillance?

Step 1: Encourage employees to report health information in a confidential setting.

Step 2: Create a storage platform for all information collected.

Step 3: Look at the information collected regularly to identify health problems in employees.

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NIOH SERVICES

Section	Services	Contact person
Occupational Medicine	**Advisory services** Advisory services on the prevention and management of occupational diseases and disorders offered to organizations within the SADC region. **Occupational Medicine Specialist Referral clinic** Services provided to current and former workers referred for different clinical assessments. Referrals may be by OMPs or self-referrals. **Ergonomics services** Ergonomics Unit provides services in relation to conducting ergonomic risk assessments for organizations, in line with the Ergonomics Regulations (2019). **Teaching and training** Workshops on the prevention and management of occupational diseases and disorders. Teaching in undergraduate and postgraduate programs on occupational and public health. **Research** Research on various occupational exposures and health outcomes.	**Occupational Medicine Specialist referral clinic:** Mr Jacob Senamolela Tel: 011 712 6462 Email: JacobSe@nioh.ac.za **Ergonomics Unit:** Ms Buyisiwe Nkosi Tel: 011 712 6545 Email: BuyisiweN@nioh.ac.za
Occupational Hygiene	**Occupational Hygiene Training Association (OHTA) Modules** The Occupational Hygiene Section is an approved OHTA trainer, and provide training on the following modules: Foundation level: • OHTA201 Basic principles in Occupational Hygiene Intermediate level – core modules: • OHTA501 Measurement of Hazardous Substances • OHTA503 Noise – Measurement and its effects • OHTA505 Control of Hazardous Substances • OHTA507 Health effects of Hazardous Substances Intermediate level – optional modules: • OHTA502 Thermal Environment. • OHTA504 Asbestos and other fibres. • OHTA506 Ergonomics Essentials.	Dr Jeanneth Manganyi Tel: 011 712 6406 Email: JeannethM@nioh.ac.za Mrs Karen du Preez Tel: 011 712 6435 Email: KarenD@nioh.ac.za Mr Gabriel Mizan Tel: 011 712 6457 Email: GabrielM@nioh.ac.za

Section	Services	Contact person
	Asbestos Training The Occupational Hygiene Section is registered with the Southern African Institute for Occupational Hygiene (SAIOH) as a training provider for the following module: • AP101: The analysis of airborne asbestos fibres using phase contrast microscopy. **Other Training** The Occupational Hygiene Section develop the following additional Occupational Hygiene-related training modules: • Occupational Hygiene report writing and interpretation; • Occupational Health & Safety risk assessment; • Respirator fit testing.	
Epidemiology and Surveillance	**Training** • Epidemiology and Biostatistics Training: Basic and Advanced courses. • How to use routine surveillance data to improve the health of workers. • How to use REDCap **Epidemiology Services** • Protocol development for research on Occupational exposures and Health outcomes. • Development of REDCap tools and other data collection tools. • Research on work exposures and health outcomes in the workplace. • Analyses of routine medical surveillance data. • Developing analysis plans for surveillance data. • Literature Reviews on occupational health topics. • Evaluation of Surveillance systems. • Advice and guidance around developing a surveillance system or advice for selecting a service provider for surveillance tools. • Designing or conducting occupational health screening surveys along with staff satisfaction and mental health surveys in your workplace. • Evaluation of training programs in occupational hazards, health and safety.	Asanda Jekwa Tel: 011 712 6427 Email: AsandaJ@nioh.ac.za

NATIONAL INSTITUTE FOR OCCUPATIONAL HEALTH

Division of the National Health Laboratory Service

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