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Physical Agents Regulations, 2024

== A review of the medical aspects ==

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Session Objectives & Structure

What you will take away from today — and how we will get there

PART 1 Garth Hunter

Regulatory context, structure & key compliance requirements — a practical walkthrough of each stressor

PART 2 Dr Greg Kew

Medical aspects — **Regulation 8:**
Medical Screening & Medical Surveillance

What you should know as a Health and Safety professional, and why.

CLOSE Take-Home & Q&A

Q&A

By the end of this session, you will understand:

- The “**OH Process Flow**”, and how this relates to Regulation 8 of the Physical Agents Regulations (and similarly for other Regulations)
- The different roles of the Occupational **Health** Practitioner and the Occupational **Medicine** Practitioner.
- The role of the **Medical Certificate of Fitness, who signs it**, and how it triggers **outcomes management**.
- The difference between **medical screening** and **medical surveillance**, and why this matters
- What to expect of your Occupational Health Service Provider

The Physical Agents Regulations, 2024



1. Definitions
2. Scope of application
3. Information, instruction and training
4. Duties of persons who may be exposed to a physical agent
5. Duties of designers, manufacturers, importers and suppliers
6. Physical agent exposure risk assessment
7. Physical agent exposure monitoring
8. Medical screening and medical surveillance

9. Cold stress
10. Heat stress
11. Illumination
12. Indoor air quality
13. Vibration
14. Occupational non-ionising radiation

The “physical agents”

15. Prevention or control of exposure to a physical agent
16. Personal protective equipment and facilities
17. Maintenance of control measures
18. Records
19. Physical agents technical committee
20. Offences and penalties
21. Repeal of regulations
22. Short title

STAATSKOERANT, 6 MAART 2025 No. 52226 3

GOVERNMENT NOTICES • GOEWERMENTSKENNISGEWINGS

DEPARTMENT OF EMPLOYMENT AND LABOUR

NO. 5952 6 March 2025

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO. 85 OF 1993)
PHYSICAL AGENTS REGULATIONS, 2024

The Minister of Employment and Labour has, under section 43(1)(a) and (b) of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), after consultation with the Advisory Council for Occupational Health and Safety, made the regulations in the Schedule.



MS N METH, MP
MINISTER OF EMPLOYMENT AND LABOUR
DATE: 04 February 2025

The 5-step “universal” Occupational Health Process flow



#1

Safety Risk Assessment

1. ID the safety-critical tasks
2. Core task requirements per job
3. Human capabilities needed
4. Minimum medical requirements
5. Options for accommodation

#2

Health Risk Assessment

1. Hazard ID
2. Harmfulness Assessment (vulnerability)
3. Exposure Assessment
4. Risk Calculation
5. Hierarchy of Controls

#3

Medical Screening - Design

1. Test Selection (what to look for)
2. Frequency / intervals
3. Who does what?
4. Thresholds for action
5. Outcomes planning

#4

Medical Screening – Doing

Interview, physical exam, ± special investigations

Outcomes Management

Fit / Not Fit? -> Actions

#5

Outcomes Management

Occupational Disease? -> Actions
Fit / Not Fit? -> Actions



$$\text{RISK} = (\text{HARMFULNESS OF HAZARD}) \times (\text{AMOUNT OF EXPOSURE})$$

HAZARD

(HCA, HBA, Noise, **Physical**,
Ergonomic, Psychological)

X

EXPOSURE

Duration, frequency, intensity

PERSON
vulnerability
factors
(influence
response to the
hazard)

Medical screening helps identify
the **vulnerable employee**.

Medical screening / surveillance if...

- ✓ 1. Significant risk (harmfulness), also considering the “vulnerable employee”
- ✓ 2. Hazard known to cause identifiable occupational disease or adverse effect
- ✓ 3. Reasonably likely to occur in the particular conditions of work
- ✓ 4. Techniques to diagnose indications of the disease (screening tools)

ENVIRONMENTAL
factors
(influence
exposure, such as
synergistic
effects, **confined**
space, wind, etc)

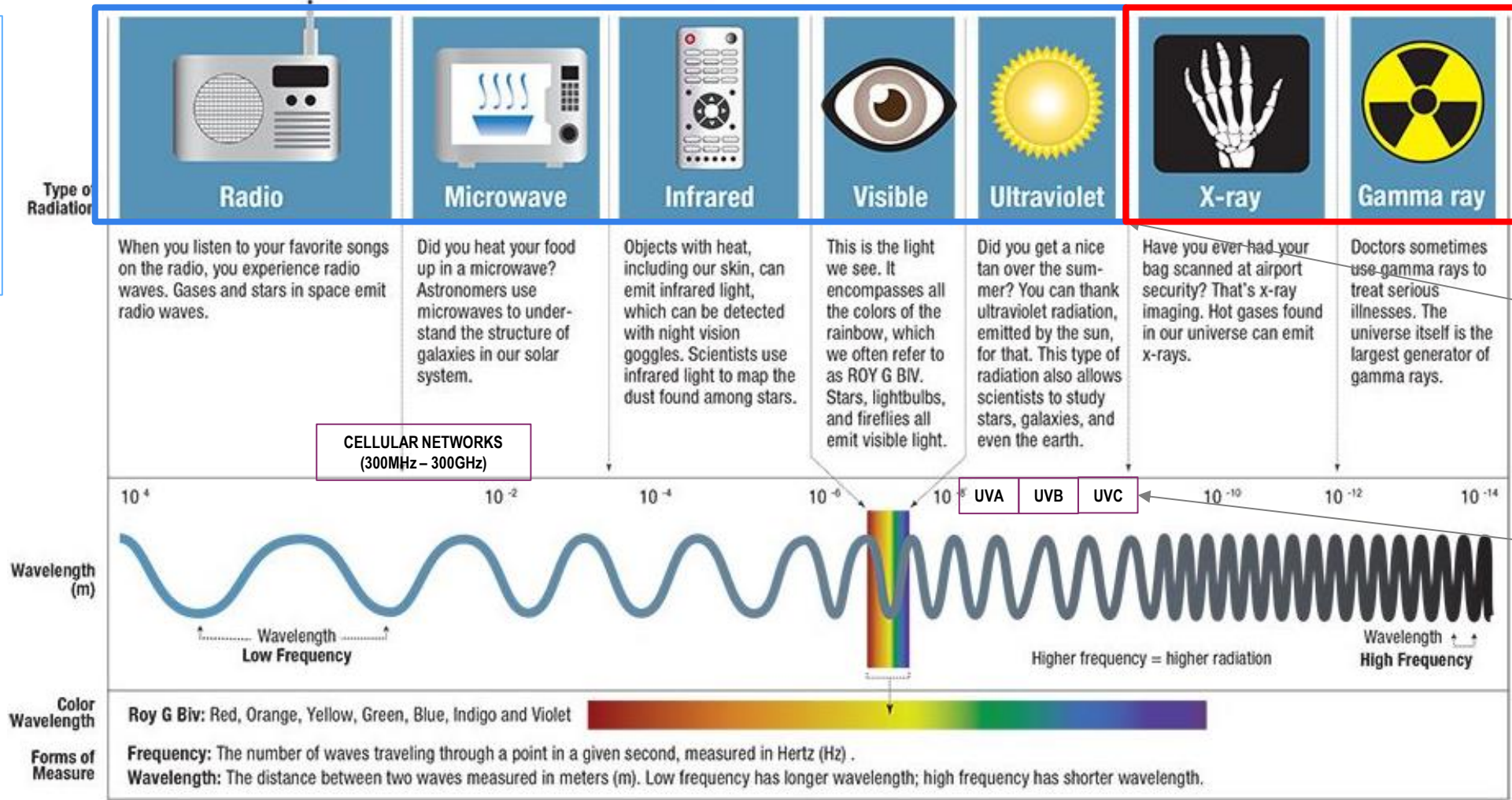
eg. vibration + cold, vibration +
noise; confined space + poor
ventilation.

Visible light, UV light and “Radiation”



NON-IONISING radiation

IONISING radiation



CELLULAR NETWORKS (300MHz - 300GHz)

UV light occurs in sunlight.
 UVA & UVB reaches earth
UVA – skin aging
UVB – skin cancer, cataracts
UVC completely absorbed by earth's atmosphere
 We generate it artificially in lamps for “germicidal radiation”.

“Radiation” is energy that moves in the form of waves. “Light” is a form of “radiation” – such as sunlight (“natural light”). Radiation waves occur in nature in various forms including visible light; we give names to these forms of radiation according to their frequencies - from lower frequencies (infra-red, microwave, radio) to higher frequencies (ultraviolet, x-rays, gamma rays) Ultraviolet light is the part of this spectrum - just beyond visible violet light



"**medical screening**" means a risk-based systematic medical assessment of a person or a group of people using a combination of medical history, physical examination and special tests or investigations to detect disease or abnormality;

[**Medical surveillance** (OHSA Definition): "a planned programme or periodic examination (which may include clinical examinations, biological monitoring or medical tests) of employees by an OHP or, in prescribed cases, by an OMP"]

Take home:

- ▲ **Medical screening:** a clinical assessment on individuals comprising various medical tests to detect abnormality [*fitness to work or occupational disease*]
- ▲ **Medical surveillance:** "a planned programme of medical screening plus the analysis of outcomes data, aimed at preventing occupational disease". (aligned with the Mines Health & Safety Act)

"**vulnerable employee**" means an employee who is at a higher risk of injury, disease or complications caused by exposure to a physical agent; [*Remember "comorbidities" in the COVID-19 pandemic?*]



8. Medical screening and medical surveillance

(1) An employer must ensure that an employee is placed under a **documented** medical screening programme—

(a) where the physical agent exposure **risk assessment** or review of such assessment **indicates the need** for the employee to be placed under medical screening; or

(b) for a **vulnerable employee**, in which case the employer must obtain the **opinion of an occupational medicine practitioner** to determine whether it is necessary to conduct medical screening.

1. Safety Risk Assessment

2. Health Risk Assessment

3. Medical screening - design

4. Medical screening - doing

5. Outcomes Management

Screening Protocols for:

- Cold stress
- Heat stress
- Vibration
- Non-ionising radiation
- (Indoor air quality)

Key messages:

- The programme must be **documented** – the DOEL inspector may want to see this.
- The medicals must be **risk-appropriate** (inclusion criteria not stated – OMP decision?)
- The OMP determines if a specific **vulnerability** is a trigger for inclusion

8. Medical screening and medical surveillance (2)



(2) In the case where the employer has to conduct medical screening as contemplated in subregulation (1), **the occupational medicine practitioner must consider if—**

(a) an employee has a health condition that makes the employee **vulnerable** to a physical agent;

(b) an employee has a health condition that **impacts the proper use of personal protective equipment**;

(c) there is an identifiable **occupational disease** or adverse health effect related to a physical agent;

(d) there is a **reasonable likelihood that the occupational disease or adverse health effect may occur** under the particular exposure conditions of the employee's work; and

(e) there are **valid techniques to diagnose** indications of the occupational disease or adverse health effect, as far as is reasonably practicable.

1. Safety Risk Assessment

2. Health Risk Assessment

3. Medical screening - design

4. Medical screening - doing

5. Outcomes Management

Key messages:

- The OMP to consider the risks that drive inclusion (you can ask the OMP to explain the reasoning)

Fitness to Work

Occupational Disease Risk

8. Medical screening and medical surveillance (3)



(3) Where the need for medical screening has been determined as necessary by the occupational medicine practitioner, the occupational medicine practitioner must specify requirements for medical screening, including—

(a) an evaluation of an employee's medical, occupational and exposure history;

(b) the appropriate clinical examination and medical tests; and

(c) the intervals at which medical screening must be conducted, appropriate to the health risks and health status of an employee.

(4) The employer must ensure that the medical screening contemplated in subregulation (1)—

(a) is carried out by an occupational health practitioner; and

(b) includes—

(i) an initial medical screening, as far as reasonably practicable, immediately before an employee commences employment; and

(ii) subsequently, periodic medical screening at intervals recommended by the occupational medicine practitioner, but not exceeding 24-months.

1. Safety Risk Assessment

2. Health Risk Assessment

3. Medical screening - design

4. Medical screening - doing

5. Outcomes Management

Key messages:

- The OMP designs
- The OHP implements
- The OMP to determine who does what, when, and how often

8. Medical screening and medical surveillance (4)



(5) After concluding medical screening, the **occupational health practitioner** must ensure that the employer is **informed, in writing, of the outcome of an employee's health evaluation if the outcome was normal.**

(6) The **occupational medicine practitioner** must notify the employer in writing by means of a **medical certificate of fitness**, and inform the employee accordingly, **if—**

(a) the employee has a **medical condition** which—

- (i) **prevents the wearing of personal protective equipment; or**
- (ii) is likely to be **aggravated by the exposures** at that workplace; **or**

(b) the medical screening **identifies an adverse health effect** caused by exposure to a physical agent at that workplace.

1. Safety Risk Assessment

2. Health Risk Assessment

3. Medical screening - design

4. Medical screening - doing

5. Outcomes Management

Fitness to
Work

Occupational
Disease

Key messages:

- If all is okay, the OHP (usually the Nurse) certifies “normal” (“fit” / “no problems”) (in writing).
- If OHP identifies an issue – refers to OMP
- OMP must confirm if issue exists (occupational disease and/or fitness to work)
- OMP issues a medical certificate of fitness which determines the next steps (outcomes management)

8. Medical screening and medical surveillance (5)



(7) The employer must ensure that an **exit medical screening** is carried out by an **occupational health practitioner** on termination of an employee's employment: Provided that a medical screening conducted within **6-months** prior to the date of termination of employment shall be deemed to have fulfilled the requirements of an exit medical screening.

This sub-regulation simply completes sub-regulation (4)

- The employer must ensure that the medical screening contemplated in subregulation (1)—
 - Pre-Employment
 - Periodic
 - **Exit**

1. Safety Risk Assessment

2. Health Risk Assessment

3. Medical screening - design

4. Medical screening - doing

5. Outcomes Management

Key messages:

- An exit medical is now routine in the OHS Regulations (this is new)
- The OMP must determine what is included in an exit medical (more important for diseases surveillance than for fitness to work adjudication)
- If the last periodical was within 6 months it can be used as the exit medical
- The duty to ensure this happens lies with the employer – can be a challenge (employee absconds or is dismissed)

8. Medical screening and medical surveillance (6)



(8) With respect to the **medical certificate of fitness** contemplated in subregulation (6), the certificate must indicate at least—

- (a) the recommendations pertinent to the employee's **fitness** to perform the inherent requirements of the job;
- (b) the presence of an **occupational disease**, without including confidential medical information;
- (c) if any **restrictions** or **conditions** apply to any specified duties performed by the employee; and
- (d) the **period** for which any restrictions or conditions, as applicable, should be applied.

(9) The employer must, as far as is reasonably practicable—

- (a) **accommodate** the conditions or restrictions recommended; and
- (b) **only permit** an employee who has been medically certified for **restricted duties** to **return to normal duties** if the employee has been **certified fit for those duties** by an **occupational medicine practitioner**.

1. Safety Risk Assessment

2. Health Risk Assessment

3. Medical screening - design

4. Medical screening - doing

5. Outcomes Management

Key messages:

- Certification focuses on two key outcomes – (1) fitness to work, and (2) occupational disease
- “Conditions” = proviso’s that must be met for the certification
- “Restrictions” = tasks or location prohibitions requiring (reasonable) accommodation (aligns with COID AA & LRA (sched 8))

8. Medical screening and medical surveillance (7)



(10) An employer must establish, implement and maintain a **documented system of medical surveillance**, overseen by an **occupational medicine practitioner**, where medical screening has been determined necessary.

(11) The medical surveillance contemplated in subregulation (10) must at least—

(a) include an **analysis of the screening results over time**; and

(b) use the results of subregulation (2) to **identify the need for targeted exposure prevention** in the workplace.

1. Safety Risk Assessment

2. Health Risk Assessment

3. Medical screening - design

4. Medical screening - doing

5. Outcomes Management

Key definitions:

- **Medical surveillance** (OHSa Definition): “a planned programme or periodic examination (which may include clinical examinations, biological monitoring or medical tests) of employees by an OHP or, in prescribed cases, by an OMP”
- **Medical screening** (These Regs): “risk-based systematic medical assessment of a person or a group of people using a combination of medical history, physical examination and special tests or investigations to detect disease or abnormality.”
- These Regs expand on the OHSa definition for medical surveillance: “a planned programme of risk-based medical screening and the systematic analysis of outcomes data, aimed at preventing occupational disease”. (aligned with the MHSa)

Key messages:

- This ties in with sub-regulation 1 - The programme must be documented – the DOEL inspector may want to see this
- “Conditions” = proviso’s that must be met for the certification

8. Medical screening and medical surveillance (8)



(12) The employer must ensure that an **employee provides written informed consent** for inclusion in the—

- (a) medical screening; and
- (b) medical surveillance programme.

(13) An **employee may appeal** any finding by an occupational medicine practitioner stipulated in the medical certificate of fitness **to the Chief Inspector** in writing within **60-days** of receiving the certificate.

1. Safety Risk Assessment

2. Health Risk Assessment

3. Medical screening - design

4. Medical screening - doing

5. Outcomes Management

Key messages:

- The process to follow for submitting an appeal is not formalised but it prescribes that it must be (1) written, (2) within 60 days of the COF, and (3) addressed to the office of the Chief inspector.
- Logically it should include (1) the details of the applicant, (2) the details of the certificate, (3) the grounds for the objection (supportive arguments and supporting documents)
- The Chief Inspector may call for reports from the original OMP or refer the employee for independent medical evaluation. There is no time-line for the response from the Chief Inspector.



employment & labour

Department:
Employment and Labour
REPUBLIC OF SOUTH AFRICA

Explanatory Notes to Physical Agents Regulations, 2024

Chief Directorate: Occupational Health and Safety

| | |
|----------------------|--|
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| Regulation 3 | Information, instruction and training |
| Regulation 4 | Duties of those who may be at risk of exposure to physical agents |
| Regulation 5 | Duties of designers, manufacturers, importers and suppliers |
| Regulation 6 | Physical agent exposure risk assessment |
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| Regulation 9 | Cold stress |
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| Regulation 12 | Indoor air quality |
| Regulation 13 | Vibration |
| Regulation 14 | Occupational non-ionizing radiation |
| Regulation 15 | Prevention or control of exposure to physical agent |
| Regulation 16 | Personal protective equipment and facilities |
| Regulation 17 | Maintenance of controls measures |
| Regulation 18 | Records |



Thank you for your attention

Questions / Discussion



FOR INFO: THE PHYSICAL HAZARDS

Workplace Health Hazards (Physical Agents – 5 sub-classes)

