


**Ionising radiation legislation:  
What it is and what it says**

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**Outline**

- Ionising radiation legislation
- Duties and responsibilities
- IRR17 specific requirements
- Questions



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**Ionising radiation legislation**



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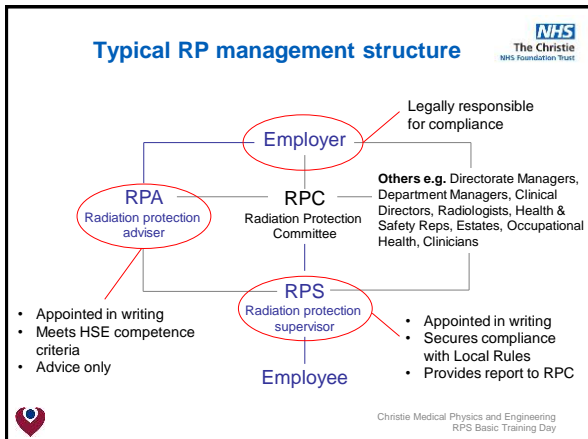
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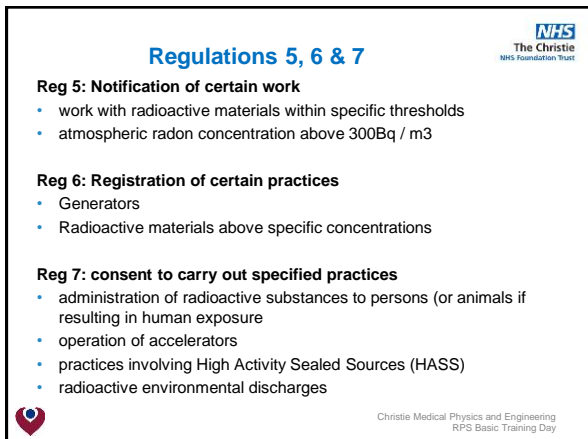
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### Regulation 8

**Reg 8: Radiation Risk Assessment**  
Prior to commencing work the employer must

1. "suitable and sufficient assessment" of risk
2. Identify measures to restrict exposures
3. Identify all hazards with potential to cause accident
4. Evaluate nature and magnitude of risk from hazards

Where there is an accident risk, the employer must take all reasonably practicable steps to

1. prevent any such accident
2. limit the consequences
3. provide information, instruction and training and equipment to restrict their exposure

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### Regulation 9

**Reg 9: Restriction of Exposure**  
Employers must ensure doses are kept ALARP

- Hierarchy of control measures:
  - Engineering controls and design features
  - Safety features and warning devices
  - Systems of work
  - PPE
- Dose constraints
- Investigation level
- Breastfeeding employees must not be engaged in any work with significant risk of intake of radionuclides or bodily contamination

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### Regulations 10 & 11

**Reg 10: PPE**

- PPE to comply with PPE Regulations 2002
- Employer must provide appropriate storage

**Reg 11: Maintenance & examination of engineering controls and PPE**  
The employer must ensure that engineering controls, design features, safety features, warning devices or PPE are

1. properly maintained,
2. tested thoroughly at suitable intervals.

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### Regulation 12 – Dose Limitation

	Whole body dose (mSv)	Skin, Extremities (mSv)	Lens of Eye (mSv)
Employees	20	500	20
Trainees (<18)	6	150	15
Public	1	50	15

**Dose limits do not apply to Carers and Comforters**

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### Regulation 14

**Regulation 14: Radiation Protection Advisor**

- Advise employer on observance of the Regulations
- Meets HSE competence
- Appointed in writing

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### Regulation 15

**Reg 15: Information, Instruction & Training**

The Employer must

1. Provide appropriate training in RP, to include
  - i. risks to health from ionising radiation
  - ii. General and specific procedures and precautions
  - iii. the importance of complying with the regulations
2. Provide adequate information for other persons “concerned with the work”
3. Ensure female employees “engaged in work” with IR are
  - i. made aware risks to foetus and nursing infant
  - ii. importance of informing their employer asap
4. Ensure those working in CA and with HASS receive specific training

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### Regulation 16

**Reg 16: Cooperation between employers**

Where work of one employer may cause exposure to the employees of another employer, the employers are required to exchange information to ensure compliance with the Regulations

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### Regulation 17

**Reg 17: Designation of Controlled and Supervised Areas**

- Designation based on risk assessment
- Controlled Area if:
  - need special procedures to limit dose OR
  - any person may receive
    - >6mSv effective dose OR
    - >15mSv to the lens of the eye OR
    - >150 mSv to the skin or extremities
- Supervised Area if:
  - necessary to keep area under review OR
  - any person may receive
    - >1mSv effective dose OR
    - >5mSv to the lens of the eye OR
    - >50 mSv to the skin or extremities

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### Regulation 18


**Reg 18: Local Rules and RPSs**

Local rules

- detail arrangements for restricting exposure with regard to radiation risk and nature of the work undertaken
- must be provided for Controlled Areas
- should be provided for supervised areas if necessary

Employers must ensure the contents of the Local Rules are brought to the attention of relevant employees (and others)

RPSs must be appointed in areas with Local Rules. Their role is to secure compliance with the Regulations.

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### Regulation 19

**Reg 19: Additional requirements for designated areas**

1. Designated area must
  - i. be adequately described in the Local Rules
  - ii. have suitable and sufficient signage
2. Controlled area must be physically demarcated (or at least delineated). The employer must
  - i. Include specific conditions for entry (considering classification status, employee, outside worker...etc.)
  - ii. Keep documents to demonstrate environmental doses are restricted
  - iii. Make adequate arrangements to restrict the spread of radioactive contamination

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### Regulation 21


**Reg 21: Designation of classified persons**

Employees must be classified if they are likely to exceed

- 6mSv effective dose
- 15mSv to the lens of the eye
- 150mSv to the skin or extremities

Classified workers must be

- >18 years old
- certified fit to work with ionising radiation by relevant doctor
- Made subject to medical surveillance (Reg. 25)

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### Regulation 22

**Reg 22: Dose assessment and recording**

The employer must

1. make, and record, an assessment of all "significant" doses for classified employees
2. Make arrangement with approved dosimetry service to
  - i. Make systematic assessments of doses
  - ii. Maintain individual dose records
  - iii. Provide summaries of dose records
  - iv. Provide radiation passbook where appropriate

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### Regulation 25

**Reg 25: Medical surveillance**  
Employees must be under adequate surveillance by a relevant doctor (appointed doctor or employment medical adviser) where

1. They are classified (or prospectively classified)
2. They are overexposed non-classified employees
3. a relevant doctor has made a certification

Health records must be maintained (for 30 years)

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### Regulation 26

**Reg 26: investigation and notification of overexposure**

- Overexposure means dose limit has been exceeded
- An investigation must be performed
- The person affected, appropriate authority, relevant doctor and other employers must be notified as soon as practicable
- Measures to prevent recurrence must be implemented
- Preliminary investigation reports must be kept for 2 years
- If over exposure confirmed, records of investigation must be kept for 30 years
- If overexposure confirmed then dose record (if available) must be amended

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### Regulation 32

**Reg 32: Duties of Manufacturers etc of articles for use in work with ionising radiation**

- Manufacturer
  - must ensure equipment is designed and constructed to restrict dose to employees and other persons ALARP
- Installer
  - critical examination
  - consult with RPA about critical examination & results
  - provide adequate information on use, testing and maintenance

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**Regulation 34 & 35:**

**Reg 34: Misuse of or interference with sources of ionising radiation (Applies to all persons)**

**Reg 35: Duties of employees**

1. Take reasonable care not expose themselves or others to a greater extent than is necessary
2. Employees and outside workers provided with PPE must
  - i. Make full and proper use
  - ii. Report defects
  - iii. Store appropriately
3. Classified outside worker must not misuse passbook or falsify information
4. Must comply with employer regarding dose assessment
5. Present for medical examination (classified workers)
6. Report radiation incidents

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**Regs not covered in this talk**

- Reg 13: Contingency plans
- Reg 20: monitoring of designated areas (Covered in modality break-out sessions)
- Reg 23: estimated and notional doses and special entries
- Reg. 24: dosimetry for accidents
- Reg. 27: dose limitation for overexposed employees
- Reg. 28 – 31: covered in break-out sessions
- Reg. 36 approval of dosimetry services
- Reg. 37: defence on contravention
- Reg. 38: exemption certificates
- Reg. 39: extension outside Great Britain
- Reg. 40: modifications relating to the Ministry of Defence etc.
- Reg. 41: transitional provisions and savings
- Reg. 42: modifications and revocation
- Reg. 43: review

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**Questions**

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Radiation Protection Update 2017

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