

Fallout Survival Gear After a Nuclear Strike

Executive summary

Radioactive fallout is primarily a **time-distance-shielding** problem: protection comes mainly from getting **inside quickly**, choosing a **more-shielded location** (basement or central rooms), and **staying sheltered while radiation decays**. Official guidance repeatedly emphasises “get inside, stay inside, stay tuned”, including closing windows/doors and reducing outside air intake through ventilation systems. ¹

For the first **24–72 hours**, your most valuable “gear” is a **robust indoor shelter setup** with contamination control, plus the ability to **decontaminate** if you were outside after fallout arrived. Removing outer clothing can reduce external contamination substantially (often cited at around **90%**) and washing with **soap and shampoo** is recommended; **do not use hair conditioner** because it can bind contaminants to hair (per UK guidance). ²

Off-the-shelf equipment that most improves survival odds in fallout conditions falls into seven practical clusters:

- **Shelter & air/entry control:** materials to close/cover openings, isolate a “clean room”, and create a controlled “dirty-to-clean” transition.
- **Decontamination consumables:** bags, wipes, soap/shampoo, spare clothing.
- **PPE for short outdoor tasks only:** FFP2/FFP3 respirators, gloves, disposable outerwear.
- **Radiation awareness:** at minimum, a **reliable dose-rate meter**; ideally also a personal dosimeter, plus spare batteries and an understanding of device limits.
- **Stable iodine tablets (KI/KIO₃):** only if authorities advise; protects **only** the thyroid against **radioactive iodine**, not against external gamma or other radionuclides. ³
- **Two-weeks sustainment:** stored water/food, sanitation, lighting, comms, essential medicines.
- **Weeks-months resilience:** hygiene, heating, repair supplies, and the ability to maintain a “clean living core” while limiting re-contamination.

Scope and assumptions

This report focuses on **fallout conditions after a nuclear detonation** (i.e., radioactive particles deposited downwind), not on surviving the **blast/thermal pulse** very near ground zero. Fallout hazards and protective actions depend heavily on weapon yield, burst height, weather, and building stock; because no location is specified, the recommendations assume:

- You are far enough from the detonation to have a viable sheltering period (building not collapsing or burning).
- You can shelter indoors for **at least 24 hours** (ideally longer if dose rates are still high and you have supplies). Guidance for nuclear detonation response planning notes that **sheltering longer than 24 hours may be desirable** where adequate shelter and resources (food/water/medications) exist. ⁴
- You may have intermittent power/water and must be able to operate without external help for **2+ weeks**.

All medical and radiological actions should follow **official instructions** during an incident; do not self-deploy medications (especially iodine tablets) unless instructed. ⁵

Fallout physics that drives the gear priorities

Fallout is dangerous mainly because deposited particles emit penetrating radiation (“groundshine”). Modern emergency medical guidance for nuclear detonation notes that, once particles reach the ground, the **most serious hazard** is typically **external exposure to penetrating gamma radiation**, more than inhalation/ingestion in many scenarios—hence the emphasis on getting behind shielding quickly. ⁶

Radiation levels can drop quickly in the first days because many fission products are short-lived. The widely used “7–10 rule” (rule of thumb) states that for every **sevenfold increase in time**, radiation dose rate decreases by **tenfold**; examples given include: at 7 hours post-detonation dose rate $\approx$ one-tenth; at ~49 hours $\approx$ one-hundredth; at ~2 weeks $\approx$ one-thousandth (relative to the 1-hour reference). ⁷

This decay is why the first **24–72 hours** are so gear-critical: the goal is to **avoid being outside** while dose rates are highest and while visible particles are settling. Nuclear detonation guidance also notes the protective value of thicker, denser buildings and basements, using “dose reduction factors” (e.g., a factor of 200 means $\sim 1/200$ of the outdoor dose). ⁸

Immediate sheltering and sealed-room setup for the first 24–72 hours

Authoritative public guidance consistently recommends:

- **Get inside immediately**, prefer a **basement** or the **middle of a large building**, away from windows/outer walls/roof. ⁹
- **Close and lock windows and doors**; reduce outside air entry by turning off systems that bring air from outside (fans, air conditioners, forced-air heating) and closing fireplace dampers where possible. ¹⁰
- **Stay inside for 24 hours** unless authorities say otherwise (and longer if you have adequate shelter/resources and safety dictates). ⁴

Off-the-shelf shelter/containment kit (purpose, specs, models, costs, tips)

The objective is not to create an airtight bunker; it is to create a **clean living core** and reduce re-suspension/infiltration of dust.

Heavy-duty plastic sheeting (builders’ polythene) - Purpose: cover a broken window, isolate a “dirty” entry area, protect floors for decon. - Minimum specs: 100–200 micron thickness (heavier is more tear-resistant); wide rolls; clear preferred for daylight. - Cost: typically low tens of pounds per roll (varies widely with size/quality). - Pros/cons: cheap and versatile; can trap condensation and tear if thin. - Procurement tips: buy from builders’ merchants; store rolled, not folded.

Tape for dust sealing - Purpose: seal cracks and edges (around window frames, vents you can safely close), attach plastic. - Minimum specs: at least one strong cloth tape (duct tape) plus a clean-removal tape (painter’s tape) for delicate finishes. - Cost: low. - Tips: do not tape over active combustion appliance vents; follow building safety.

Door draft seals / weatherstripping - Purpose: reduce dust entry around doors in the refuge room. - Minimum specs: adhesive foam/rubber strip. - Cost: low.

Two-zone entry management - Purpose: create a “dirty” transition zone at one door to the refuge room to prevent tracked-in dust. - Minimum specs: plastic drop cloth on floor; sealable waste bags; disposable gloves; wipes. - Cost: low.

- Rationale: UK and CDC guidance emphasises bagging contaminated materials away from people/pets.

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Diagram references for shelter location

Two official visuals that illustrate safer shelter locations (basement/centre of building, away from windows/roof):

CDC “Where to Go in a Radiation Emergency” (infographic PDF):
https://www.cdc.gov/radiation-emergencies/media/pdfs/infographics/Infographic_Where_to_go.pdf

FEMA Shelter-in-Place pictogram (includes nuclear detonation page with example shelter locations):
https://www.uvu.edu/emergencymanagement/docs/fema_shelter-in-place_guidance-access.pdf

The CDC infographic’s “safest/safer/not safe” shelter placement is shown in the PDF image. 12

The FEMA pictogram includes illustrated room choices for different building types and the “stay inside for 24 hours” instruction. 13

Decontamination procedures and supplies

What decontamination can realistically achieve

Decontamination is about removing radioactive particles from **skin/hair/clothing** to reduce external exposure and prevent contaminating your shelter. UK guidance notes that removing outer clothing can remove around **90%** of contamination, and recommends showering (or wiping exposed skin if a shower isn’t available) using soap and shampoo, avoiding conditioner. 14

CDC guidance similarly stresses bagging used wipes/cloths and placing them away from people and pets. 15

Off-the-shelf decon kit (purpose, specs, costs, tips)

Seal-able bags (rubble sacks and zip bags) - Purpose: isolate contaminated clothing/wipes; reduce re-suspension. - Minimum specs: thick sacks that can be tied; zip bags for small items (phones/keys). - Costs: low. - Tips: label bags and keep them in a low-traffic, isolated corner (garage/balcony if safe and closed off) per public guidance to keep waste away from people/pets. 16

Nitrile gloves (disposable) - Purpose: prevent contamination transfer during clothing removal, washing pets, cleaning. - Minimum specs: nitrile (better chemical resistance than latex), multiple sizes; 4–6 mil thickness for dexterity. - Cost: low to moderate. - Tips: store multiple boxes; glove changes are cheaper than re-contaminating your shelter.

Soap + mild shampoo + running water access plan - Purpose: remove particles from skin/hair. - Minimum specs: plain soap and shampoo; no conditioner (per UK). ¹⁷ - Tips: keep spare towels; use warm water; do not scrub hard or damage skin. ¹⁶

Wet wipes / damp cloths / paper towels - Purpose: fallback when showers aren't available. - Minimum specs: unscented wipes; lots of absorbent paper towel. - Tips: bag used wipes/cloths. ¹⁵

Disposable coveralls (Type 5/6) - Purpose: short outdoor tasks (e.g., moving supplies from a doorway) while reducing dust transfer. - Minimum specs: hooded, elastic cuffs/ankles; taped seams preferred. - Limits: does not block gamma radiation; reduces contamination transfer only. ⁶

Pets: decontamination and supplies

UK guidance: bring pets indoors if they're with you, do not go outside searching for a missing pet, and if pets may be contaminated wash them with shampoo/soap and water; wear gloves and a face mask if possible. ¹⁸

CDC provides similar instructions and stresses keeping pets inside if told to shelter. ¹⁹

Practical pet add-ons: - pet wipes, spare lead/harness, carrier/crate - 2+ weeks pet food, plus **sealed water** for pets (pet food in sealed containers is noted as safe in CDC guidance) ²⁰ - litter and disposable litter trays for cats (hygiene and containment)

Personal protective equipment and use limits

PPE priorities for fallout

PPE helps principally with **dust/particle control** and **preventing re-contamination** during short, unavoidable outdoor movements. It cannot "shield" you from the main hazard of fallout (penetrating gamma rays), so PPE should not encourage unnecessary outdoor exposure. ²¹

Respirators matter most for: - brief transits through dusty corridors/entrances - tasks that might re-suspend dust (moving bags, sweeping should be avoided)

Gloves and disposable outer layers matter most for: - removing contaminated clothing - washing pets/children - handling bagged waste

Respirator fit and selection (UK/EU)

Tight-fitting facepieces only work if they seal well; UK workplace guidance states fit testing is needed when using tight-fitting respirators, and each make/model/type must be fit tested. ²²

For the general public, you usually cannot supply formal fit testing at home, so prioritise designs that fit a wide range of faces, buy multiple sizes where offered, and practise donning/doffing cleanly.

Comparison table: six recommended particle respirators available in UK/EU

All below are EN 149 filtering facepiece respirators (FFP). Manufacturer guidance confirms EN 149 compliance for the 3M Aura 9300+ series, Moldex classics/air plus masks, and Dräger X-plore 1900 series technical data. ²³

Model (example)	Class	Valve	Reuse marking	Minimum spec to insist on	Approx. UK/EU price signal	Pros	Cons / watch-outs
3M Aura 9320+	FFP2	No	NR (single-shift)	EN 149:2001+A1:2009; head straps (not ear loops)	~£69/20 pack shown by a UK PPE supplier listing ²⁴	Widely used, fold-flat, good comfort/fit for many faces	Counterfeits exist; FFP2 may be inadequate for high-dust tasks
3M Aura 9330+	FFP3	No	NR	EN 149; individual packaging preferred	~£3.13/ unit indicated by an industrial distributor listing ²⁵	Higher filtration (FFP3), fold-flat	Still needs good fit; higher breathing resistance than FFP2
Dräger X-plore 1920	FFP2	No	NR D (dolomite clog test)	EN 149; "D" marking for clog resistance sustained use	~£2.41/ unit shown by industrial distributor ²⁶	High availability; D marking; good value	Fit varies; buy a small box first to test comfort
Dräger X-plore 1930	FFP3	No	NR	EN 149; head harness	~£6.20/ unit indicated by distributor ²⁷	FFP3 option with robust straps	Cost per mask higher; stock can be variable
Moldex 2405 (Classic)	FFP2	Yes	NR D	EN 149; exhalation valve for comfort	~£49.95 ex-VAT per box of 20 from UK safety retailer ²⁸	Tough shell; valve reduces moisture; comfortable for longer chores	Valve means exhaled air not filtered (irrelevant to fallout, but relevant in infectious disease contexts)
Moldex 3405 (Air Plus)	FFP3	Yes	R D (reusable)	EN 149; "R" for reuse; full face seal design	~£37.51 inc-VAT per 5 pack shown by UK retailer ²⁹	Better facial seal; reusable rating; FFP3	Bulkier; ensure clean storage to avoid contaminating inside surface

Procurement tips for respirators: - Buy from established industrial/PPE supply chains; check packaging markings (EN 149 + class + NR/R + D where present). - Store in a sealed box/bag in your “clean room” so masks remain uncontaminated until needed. - If you have facial hair, expect far poorer seal; consider alternative strategies (minimise outdoor tasks; rely more on sheltering). Fit testing guidance underscores seal dependence. ²²

Radiation detection, dosimetry, and stable iodine tablets

What your instruments should do (minimum specs)

For fallout decision-making you want to answer two questions: 1) **Is it safe to be outside now?** (dose-rate, e.g., $\mu\text{Sv/h}$ or mSv/h)

2) **How much dose have I accumulated?** (cumulative dose, e.g., mSv)

Minimum practical specifications to insist on: - Dose-rate measurement with a range that meaningfully covers severe fallout (at least into **mSv/h** ; ideally up to **Sv/h** for professional instruments). - Known energy calibration/response and clear overload behaviour. - Alarms (audible/visual/vibration) for dose-rate and/or cumulative dose. - Battery strategy that works without mains power for weeks (AA/AAA preferred or long-life internal cell). - Calibration support (re-calibration service or documented check method).

Where possible, prefer instruments built to recognised dosimetry standards (e.g., IEC 61526 / IEC 60846), as seen in professional dosimeter specifications. ³⁰

Comparison table: six recommended dosimeters/survey meters (mix of consumer and professional)

Device	Type	Dose-rate range (headline)	Cumulative dose (headline)	Accuracy / response notes	Battery & longevity	Ruggedness	A ra
Mirion DMC 3000	Personal electronic dosimeter	$\sim 0.05 \mu\text{Sv/h}$ to 20 Sv/h ³¹	$\sim 0.01 \mu\text{Sv}$ to 100 Sv ³¹	Energy/angle response figures published; designed for high-range use ³¹	AAA battery life described as $>3,000 \text{ h}$ in a CERN brochure ³²	IP67 noted by EU listing ³³	E re ~ (c n m
Thermo Scientific EPD TruDose	Personal electronic dosimeter	$\sim 0 \mu\text{Sv/h}$ to $\geq 10 \text{ Sv/h}$ ³⁴	$\sim 0 \mu\text{Sv}$ to 10 Sv ³⁴	Accuracy figures published (e.g., gamma $\text{Hp}(10) \pm 5\%$) ³⁴	Single AA; ~ 40 days continuous on alkaline, longer on lithium thionyl chloride ³⁴	IP67 for G/NG versions (per spec sheet) ³⁴	E re ~

Device	Type	Dose-rate range (headline)	Cumulative dose (headline)	Accuracy / response notes	Battery & longevity	Ruggedness	A
Mirion RDS-32WR	Handheld survey meter (wide-range)	Up to 10 Sv/h on WR variant ³⁶	Integrated dose available ³⁷	Professional meter; alarms and logging available ³⁷	2×AA; “battery life more than 600 h” and multi-month operation claims in manual ³⁸	IP67 (WR variants) noted ³⁶	E li ~
RADOS RDS-200	Handheld survey meter	GM-based; up to 10 Sv/h noted in manual error handling/specs ⁴⁰	Dose function available ⁴¹	Energy response ranges published; warns dose may be underestimated if 10 Sv/h exceeded ⁴⁰	3×AA; ~200 h battery life in background field ⁴⁰	IP67 per manual ⁴⁰	C s p w (e li fr to
S.E. International “Ranger”	Consumer/prosumer GM survey meter	0.001–100 mR/h; 0.01–1000 µSv/h ⁴³	Total counts up to 9,999,000; dose/rate modes present ⁴³	“Typically ±15% from factory, ±10% with NIST source” and conversion optimised for Cs-137 ⁴⁴	2×AA; ~800 h at background ⁴⁵	Anti-saturation behaviour described ⁴⁵	E o a ~
GAMMA-SCOUT (Rechargeable/Online)	Consumer Geiger counter + “dosimeter” function	Calibrated reliable range ~0.1–1000 µSv/h; displays higher but shows overflow beyond limits ⁴⁷	Cumulative dose supported ⁴⁸	Calibration confidence interval (5% vs master device) described; calibrated to Cs-137 ⁴⁹	Long-life internal cell; rechargeable model exists; battery type described ⁵⁰	Designed for long-term monitoring; continuous logging ⁵¹	U e ~ e r s e ~

Procurement tips for radiation instruments: - Prefer a **two-instrument approach** if budget allows: one high-range survey meter + one sensitive logger for later low-level monitoring (practical inference from the very different calibrated ranges shown above). ⁵³ - Plan power: devices using AA/AAA simplify resupply; keep lithium AAs for cold storage and long shelf life. - Budget for calibration or at least a documented functional check; some vendors explicitly sell recalibration services. ⁵² - Understand the conversion limits: some GM meters state dose-rate units are calculated using a conversion factor optimised for a specific isotope (e.g., Cs-137). ⁵⁴

Stable iodine tablets (KI / potassium iodate in UK): what to buy and when to use it

What it does: Stable iodine blocks uptake of **radioactive iodine** by the thyroid (thyroid blocking). It does **not** protect against other radionuclides, and does not protect against external radiation from ground deposits. ⁵⁵

When to take it: WHO emphasises KI should not be taken as a generic precaution; it should be taken **only when explicitly instructed** by public health authorities. Effectiveness is highest when taken shortly before or soon after exposure; WHO cites optimal timing from <24 hours before to ~2 hours after, and potential usefulness up to ~8 hours after; taking it later than 24 hours after offers no protection. ⁵⁶

UK guidance similarly warns that taking stable iodine too early reduces protection window and taking it too late reduces effectiveness; it should not be first taken more than 24 hours after exposure, and iodised salt is not a substitute. ⁵⁷

UK reality: UK emergency arrangements commonly reference **potassium iodate** tablets (not only KI). An NHS England protocol for potassium iodate 85 mg tablets provides an age-based single-dose schedule and notes equivalence to iodine content. ⁵⁸

Practical procurement guidance: - If you choose to stock it, store it in original packaging, within expiry, and keep the leaflet. The NHS protocol includes home administration instructions (crushing fractions for infants). ⁵⁸ - Do not substitute iodised salt or dietary iodine supplements. ⁵⁹

Water, food, power, comms, medical, pets, and longer-term resilience

Water and food for 2 weeks+

Water: UK guidance notes mains water supplies are typically unlikely to be affected immediately and may be considered safe unless told otherwise, but warns that surface water and some private water supplies may be contaminated. ⁶⁰

For a nuclear strike scenario where infrastructure may be damaged, you still want stored water. The American Red Cross ⁶¹ advises storing **1 gallon (~3.8 L) per person per day** and keeping at least a **2-week supply** when possible. ⁶²

Purification limits: Standard camping filters are designed for microbes; they may reduce particles but are not guaranteed to remove all dissolved radionuclides. In a real event, prioritise **sealed bottled/stored water** and follow local authority advice on water restrictions. UK and international guidance explicitly include restrictions on rainwater and local produce in certain conditions. ⁶³

Food: UK guidance indicates food and drink already indoors (including in shops) will be safe; covered/sealed food in homes and shops is unlikely to be contaminated once removed from outer packaging. ⁶⁴

CDC likewise states food in sealed containers that were outside can be safe if containers are wiped off, and advises against eating garden produce until officials say it is safe. ²⁰

IAEA training material lists restricting consumption of local produce, rainwater, and milk from grazing animals among protective actions at certain operational levels. ⁶⁵

Off-the-shelf storage recommendations: - Water: stackable 5–20 L jerrycans + bottled water; manual siphon pump. - Food: 14–30 days of ready-to-eat calories (tinned meals, rice/pasta + fuel, high-calorie snacks); infant formula if applicable.

Power, lighting, and communications

Public preparedness advice in the United Kingdom ⁶⁶ “Prepare” campaign includes a basic emergency kit with items like a **battery or wind-up torch, battery or wind-up radio**, spare batteries, and a phone power bank/charger. ⁶⁷

The British Red Cross ⁶⁸ similarly recommends torches, spare batteries, and a wind-up/battery radio as part of emergency preparedness. ⁶⁹

Minimum specs to insist on: - Lighting: headlamp + lantern redundancy; common battery formats (AA/AAA) or rechargeable with USB-C; spare cells. - Communications: at least one battery radio; consider a second radio kept sealed as backup. - Power: at least one robust power bank; for longer outages, solar charging is useful but weather-dependent.

Procurement tips: - Keep one “clean room” lighting kit sealed so it stays contamination-free. - Avoid operating fuel-burning equipment indoors; that’s a major secondary fatality risk (general emergency doctrine).

Medical supplies and medications

Fallout survival is dominated by sheltering, but your outcomes can be heavily influenced by your ability to manage: - existing prescriptions (2–4 weeks if feasible) - basic wounds and burns - dehydration and diarrhoea - stress and sleep disruption

The Red Cross preparedness guidance includes keeping necessary medications and considering special needs. ⁶²

In addition, UK stable iodine protocols highlight specific risk groups (neonates, pregnant/breastfeeding people) and monitoring considerations, reminding that iodine prophylaxis is not risk-free and should follow official direction. ⁵⁸

Practical off-the-shelf medical items (minimum specs): - Comprehensive first aid kit + haemostatic dressings - Oral rehydration salts (ORS) - Thermometer, nitrile gloves, antiseptic - Spare eyeglasses/contact supplies - Masks and gloves dedicated to caregiving within the shelter

Pet considerations beyond decontamination

Key pet principles from UK and CDC sources: - Bring pets inside if you are sheltering; don’t go out to search for them if you’re already indoors. ⁷⁰ - If contaminated, wash pets with soap/shampoo and water; wear gloves and a mask if possible. ⁷¹ - Keep pets inside afterwards to prevent further exposure and prevent them bringing contamination in. ⁷²

Pet gear add-ons: - spare lead, muzzle if needed, carrier/crate - disposable pads (for indoor toileting) - extra water for pets in sealed containers (CDC notes sealed pet food is safe; clean bowls with damp cloth and bag cloth). ²⁰

Weeks–months resilience items

If fallout leads to wider disruption, your effectiveness hinges on maintaining a controllable living environment and meeting basic needs:

- **Sanitation:** heavy-duty bin liners, absorbent material, disinfectant, hand hygiene.
- **Indoor air management:** spare HVAC filters if you have forced-air (replace later; do not bring dust in during change), cleaning cloths and a plan to bag waste per CDC/UK guidance. ⁷³
- **Repair & sealing:** spare tape, plastic, basic tools.
- **Water logistics:** more containers, manual pump, ability to transport water.

Checklists and timelines

Prioritised shopping checklist (fallout-focused)

Priority A: lifesaving in the first 72 hours - Shelter room kit: plastic sheeting, duct/painter's tape, draft seals, floor covering. - Decon kit: nitrile gloves (multiple boxes), large sealable bags, soap + shampoo, wet wipes, spare towels, clean change of clothes for every person. - Respirators: at least FFP2, ideally FFP3 for dusty tasks; buy enough for several days of intermittent use (see respirator table). ⁷⁴ - Radiation meter: at least one dose-rate capable instrument with spare batteries; if possible, add a higher-range professional meter (see dosimeter table). ⁷⁵ - Communications: battery/wind-up radio and torch per UK preparedness guidance. ⁷⁶

Priority B: 2-week sustainment - Water: aim for 2 weeks at 1 gallon/person/day as a planning baseline; increase for hygiene and pets. ⁶² - Food: 14–30 days shelf-stable foods; manual can opener; infant/pet needs. - Power: power banks and charging; spare batteries. - Medical: first aid, ORS, key prescriptions; hygiene supplies.

Priority C: weeks–months resilience - Sanitation and waste management supplies - Repair materials and tools - Additional water capacity and transport - Spare clothing and bedding stored sealed

Shelter setup checklist with step-by-step actions for the first 72 hours

Immediate (minutes to 1 hour) 1. Get inside the nearest safe building; avoid cars as shelter. ⁷⁷
2. Go to basement or central interior rooms, away from windows/outer walls/roof. ⁷⁸
3. Close and lock windows/doors; shut dampers and turn off systems that bring in outside air if possible. ⁷⁹
4. Start a “clean room” and a “dirty entry zone” near the door with bags, gloves, wipes.

If you were outside after fallout arrived (first hour) 5. Remove outer clothing carefully; bag and isolate it away from people and pets (UK guidance notes removal can reduce contamination markedly). ¹⁸

6. Shower with soap and shampoo if possible; do not use conditioner; otherwise wipe exposed skin with damp cloth/wipes and bag the cleaning materials. ⁸⁰
7. Put on clean clothes stored indoors. ⁸¹

First 24 hours 8. Stay sheltered and stay tuned for official instructions; prepare to remain inside at least 24 hours. ⁸²

9. Use stored food and water; avoid garden produce and surface water; keep pets inside. ⁸³
10. If you have a radiation meter, record indoor readings periodically and avoid “curiosity checks” outdoors.

24–72 hours 11. Continue sheltering while radiation decays; guidance recognises longer sheltering may be desirable where shelter/resources exist. ⁸⁴

12. If movement becomes necessary, minimise time outdoors; use respirator, gloves, disposable outer layer; decontaminate on re-entry. 13. Maintain strict clean/dirty separation: shoes off at boundary, bag waste, wipe surfaces with damp cloth and bag cloths. ⁷³

14. Monitor official information for evacuation routes; evacuating without advice can increase exposure risk. ⁷²

Mermaid timeline chart for first 14 days

The timeline below synthesises public shelter guidance (24+ hours), decontamination priorities, and the rapid early decay of fallout (7–10 rule). ⁸⁵

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timeline
    title First 14 Days: Fallout-Focused Actions (Assumptions noted)
    Day 0 : Get inside immediately; choose basement/centre; close windows/doors; turn off outside-air intake; start clean/dirty zones
    Day 0 : If exposed outdoors: remove outer clothing, bag it; wash (soap+shampoo), no conditioner; change into clean clothes
    Day 0-1 : Remain sheltered; ration water/food; maintain hygiene; keep pets inside; continuous official monitoring (radio)
    Day 1 : Reassess: remain inside at least 24h unless authorities instruct otherwise; measure indoor dose-rate if you can
    Day 2 : Consider only essential movement; minimise outdoor time; PPE for dust; decon on re-entry; avoid surface water and garden produce
    Day 3-4 : If instructed, follow organised evacuation; otherwise sustain shelter routine; start structured cleaning with damp cloth + bagging waste
    Day 5-7 : Expand from "clean room" cautiously; continue avoiding potentially contaminated local produce/rainwater unless cleared
    Day 8-14 : Transition to longer sustainment: water logistics, sanitation routines, medical checks, battery management; prepare for phased return/relocation if advised
  
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Short procurement guidance (UK/EU)

- Prefer established industrial supply chains for PPE and instruments (reduced counterfeit risk; better traceability).
- Buy respirators in small quantities first to confirm fit/comfort; then scale.
- For radiation instruments, prioritise published specs (dose-rate range, overload behaviour, calibration) over marketing claims; the tables above show how ranges can differ by orders of magnitude. ⁸⁶
- Stock consumables generously (bags, gloves, wipes) because guidance repeatedly relies on bagging and isolating contaminated materials. ¹¹

¹ ¹⁰ ⁷⁹ <https://www.cdc.gov/radiation-emergencies/infographic/where-to-go.html>
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