

# What To Do In A Nuclear Crisis

## Nuclear Radiation Emergency Information

1-800-BE-READY (1-800-237-3239)

"The public response should be 'shelter and shower'. Sheltering (particularly at home) is prudent early in a radiologic event, because families congregate at home and showers, clean clothing, food, and water are available. Sheltering also provides authorities time to assess the situation more completely. Evacuation might be indicated later for people in some locations, depending on the specific situation and the extended dose estimates. In other locations, remaining sheltered may result in lower radiation exposure." ([Flynn & Goans, 2006](#)) [buy article / find in library](#)

[FAQs from the CDC](#) | [Limit contamination](#)

[Download and print a pamphlet with some basic information](#)

|                                                     |                                            |                                                                           |                                                                            |  |
|-----------------------------------------------------|--------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------|--|
| Supplies<br>Water filtering<br>Purification<br>Food | First Aid<br>Burns<br>Wounds<br>Homeopathy | Sanitation<br>Shelter<br>Communication<br>Counseling and<br>Coping Skills | Research<br>Survival guides to<br>download<br>Health Care<br>Provider info |  |
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- [Emergency Forms](#) | [Evacuation Routes](#)
- External links:
- [Nuclear Facilities by State](#) - [Nuclear Power Plant Evacuation Zones](#) - [Radiation Air Monitoring](#) - [State Radiological Emergency Preparedness Agencies](#) - [Radiation Control Programs](#)
- Nuclear War Survival Skills FAQ: [Shelter Water Food First Aid](#)

**SHOWER AND SHELTER - WHAT TO DO AT HOME AFTERWARDS**  
Please download and [print this web page](#) in case the internet is no longer accessible

Audio versions: [\(Short Film\)](#) - [\(Long Film pt1\)](#) - [\(Long Film pt2\)](#)  
- [\(Clean Water Film pt3\)](#) - [\(Shelter Film pt4\)](#)

[Download NWSS Survival Manual \(27 MB\)](#) - [Download Adobe Reader](#) or [skip to the basics](#)

### Hotlines for information:

- CDC at 1-800-CDC-INFO
- 1-800-BE-READY or 1-202-282-8000, 1-202-447-3543 TTY
- The Nuclear Regulatory Commission Office of Public Affairs can be contacted at 1-301-415-8200
- The Federal Emergency Management Agency (FEMA) can be reached at 1-800- 621-FEMA / TTY (800) 462-7585
- The Radiation Emergency Assistance Center/Training Site at 865.576.1005 (Ask for REAC/TS)
- The U.S. Department of Energy (DOE) at 1-800-DIAL-DOE

### The Basics:

"Exposed skin and hair should be cleansed with soap and water repeatedly..."([Udeani & Aquilera, 2002](#)) [buy article / find in library fact check REMM Merck CA.gov](#)

"Removing clothing alone can decrease external radioactive contamination by 90%. Washing with soap and lukewarm or room-temperature water is effective and removes another 90% of

contamination (about 99% of the total is removed after both steps have been performed)."[\(Flynn & Goans, 2006\) Details](#)

If you are outside: cover your mouth and nose with a wet cloth and dust off any radioactive particles. Upon entering a shelter - clean and cover any open wounds first to prevent cross contamination. Shower and change into clean clothes in the foyer area if possible. Do not use conditioner. Put the dirty clothes in a plastic bag. In general shower and shelter until you hear otherwise. Do not scrub or scratch the skin. Gently blow your nose, wipe your eyelids, eyelashes, and ears with a clean wet cloth. If you cannot shower, use a clean wet cloth to wipe your skin. You should also wear a dust mask, cover your skin as well as possible (with clean fabric), and consider protecting your eyes from particles in the air.

From that point you might consider collecting as much non-contaminated water as possible in clean containers, and then choose the best room to shelter in, set up communication systems, arrange sanitary conditions, and organize supplies and food. I would recommend that you print out select pages of the [survival guides](#) linked below in case you lose power or access to the internet at a later time. This page is intended to summarize key points at a glance. It has evolved since 2008 to be a condensed summary of the main points of survival literature. It includes fact checking references to encourage you to research all information you find online. The author is not a medical doctor or psychiatrist or expert in the field. Please consult with your physician or expert before attempting any medical or psychiatric treatment plan or operating heavy or dangerous equipment.

### **Emergency Information for a Nuclear Accident or Attack**

[See comprehensive survival guides to download](#)

## **Supplies**

- Water: [Indoor water sources](#), [filtering](#), [purification](#)
- [Food](#)
- [General listing of Supplies](#) for emergencies from the CDC

## **Radiation and Water:**

**Indoor water sources:** Do not drink water from open water sources. Some researchers feel that water coming from a pipe underground during the first few hours may be safe if the pipes had not yet been contaminated. It should be collected and stored in clean containers (Harrison et. al., 2003).

Possible sources of water inside a shelter: Melted ice cubes, liquids from canned goods, water heater (be sure the electricity or gas is off and open the drain at the bottom of the tank), pipes, covered tanks. Some experts feel that water from toilet tanks (not the bowl) is either a last resort or *not* safe for use/consumption. Water from all sources should be purified before use. Consult an expert for instructions on how to safely access your [water heater if you choose to](#).

Both FEMA and Ready.gov claim that water from toilet tanks, radiators, hot water boilers/home heating systems, water beds, swimming pools and spas are **not** safe water sources. There is a distinction between a [water heater and a hot water boiler \(radiator\)](#). The state of Louisiana website, however, cites the toilet tank as being a

viable last resort. Most survival websites also encourage the use of available water in water heaters and toilet tanks if properly handled and purified.

**Outdoor water sources** (safest source listed first and the other sources listed in decreasing order of safety):

1. Water from deep wells and from water tanks and covered reservoirs into which no fallout particles or

fallout-contaminated water has been introduced.

2. Water from covered seepage pits or shallow, hand-dug wells. If the earth is not sandy, gravelly, or too

porous, filtration through earth is very effective. <http://oism.org/nwss/s73p919.htm>

The [SAS Survival Handbook](#) lists the safest sources of water starting with the best as:

Underground wells and springs

Water in pipes and containers

Fast flowing rivers

## **Radiation Removal**

Ways to remove radiation from water: [reverse osmosis](#), [activated carbon](#) and [ion exchange](#), lime softening, distillation, filtration (carbon, soil).

[Forbes has a good article](#) about the different ways to remove radiation from water.

Fact checking government websites: [FEMA library](#) | [Ready.gov water management](#) | [Food and water in an emergency from FEMA](#)

[Fact checking from research article: Radiologic emergency: protecting school children & the public by Harrison TW. Gustafson EM. Dixon JK link, quote](#) [How to find a journal article](#)

Reverse osmosis treatment (gore-tex fabric) is the most often mentioned way to keep radioactive plutonium and strontium out of drinking water. You probably need special equipment to accomplish this. You can [buy an economy grade system from several companies](#).

[About Reverse Osmosis from North Dakota State University and U.S. Department of Agriculture](#)

Public sector (nonprofit) fact checking websites: [Nuclear War Survival Skills](#), [Nuclear War Survival Skills \(II\)](#)

## **Distillation**

Distillation may [remove some radiation from water \(from DOE\)](#). Distillation is probably the most efficient way to remove radiation from water without using special equipment. Basically you get a large pot and put a small rack inside on the bottom. Put a bowl on top of the rack and fill the bottom of the pot with water. Put the pot lid on upside down (with a knob in the middle) so any condensation drips in the middle into the bowl. Put ice cubes on top of the upside down lid to create a hot/cold barrier. Boil the water and wait for the condensation to accumulate. Make sure it has cooled before handling or drinking. There are many youtube videos on this topic.

Ways to distill water: [Stove / heat](#), [atmospheric water generators](#), [Bottles](#), [Solar still](#).

## **Filtering**

Since most people will not have equipment available there are alternative (non-guaranteed) methods.

**Filtering** through (dense clay) earth / Natural filter – [see NWSS for directions](#) or on page 79 [NWSS.pdf](#) or [healthyindeed.com](#). If you have a terrarium it's almost the same structure: Soil, fabric, pebbles.

From the top layer downwards (in a container): Water, porous fabric, clay soil 6-7", fabric, pebbles 1.5", sticks to prop it up and then a pan to catch the filtered water.

**Settling** (clay particles will carry most of the suspended fallout particles to the bottom) directions: [NWSS](#) or on page 79 [NWSS.pdf](#) or [healthyindeed.com](#).

Fill a bucket 3/4 full with water, dig up clay from 4 or more inches under ground and mix it into the water. 1" clay for every 4" water. Let settle for 6 hrs and then siphon or dip the water out.

Other ways to remove radiation from water: Ion Exchanger, A water softener/ cation exchanger, lime softening, gravity-type table-top canisters with a charcoal or other filter system (you should also strain that through a coffee filter), and the percolation of water by a distiller into steam that gets transferred back into pure water.

[Fact checking gov websites: EPA drinking water](#) | [Soil aquifer treatment \(SAT\) system: a case study - article on pubmed.gov](#) | [healthvermont.gov](#)

[Assessing the removal potential of soil-aquifer treatment system \(soil column\) for endotoxin from the Journal of Environmental Monitoring](#) | [Decontamination Efficiencies of Pot-Type Water Purifiers from PLoS One Journal](#)

[How to remove radiation from drinking water from West Va University](#)

In terms of future planning there are some [faucets](#) and other products that you can install that may filter radiation.

Print out [Chapter 8: Water NWSS](#), [Chapter 9: Food](#)

## **Purification**

After filtering you do want to purify that water. Here are some ways to purify water (in general – not specific to radiation): **Boil** for 3-5 minutes (collect any water that evaporates). Let cool before drinking. If you pour it back and forth between 2 containers it will add oxygen and taste better (do not expose to radioactive dust). **Boiling will NOT remove radiation**. You can also add 4 drops of household bleach that contains 5.25% sodium hypochlorite per quart of water. Do not use bleaches that are scented or color safe. Mix and let stand for 30 minutes (should have slight bleach odor).

**Distillation:** boil water and collect the vapor to condense it back into water. May remove radiation though some sources debate the topic.

Fact checking references: Harrison TW. Gustafson EM. Dixon JK. Radiologic emergency: protecting schoolchildren & the public. [Journal Article, CEU, Exam Questions, Pictorial, Review] American Journal of Nursing. 2003 May; 103(5): 41-50. (35 ref) AN: 2003080375. [link](#), [quote](#)

And the [American Red Cross](#) [How to find a journal article](#)

## **Food:**

Do not eat anything that has been exposed to radioactive fallout (make sure it is sealed and covered). Avoid foods with high salt content, dairy products, bones and seafood. The best choices are soups, vegetables and fruits. Keep cans covered so that fallout does not touch the metal. Do not reheat meat after it has been cooked to avoid food poisoning. Store your food in a cool, dry place off of the ground. In terms of out of doors food - underground tubers and underground vegetables are safest followed by smooth

skinned fruits. If eating exposed animals avoid the thyroid gland, liver, and kidneys. [Fact checking references: SAS Survival Handbook](#) by John Wiseman and [Nuclear War Survival Skills](#)  
Some foods you may have in the house that might help protect against radiation damage:

Green and black tea; foods rich in beta carotene (orange or dark green leafy fruits and veggies); un-boiled miso, garlic (blocks radioactive isotope absorption); Circumin (curry); Ginger; Calcium (blocks absorption of radioactive materials); sardines (cellular repair); baking soda (protects kidneys from uranium); green leafy vegetables with chlorophyll, wheatgrass; broccoli, cabbage, cauliflower, brussel sprouts, kale, collard greens, bok choy, and mustard greens (prevent free radical damage); seaweed (prevent absorption strontium 90); carrots, sunflower seeds and apples; artichokes, beets and radishes (liver cleanse); sauerkraut and yogurt (promote healthy intestinal flora); Nutritional yeast (non-MSG); flax seeds; brazil nuts (remove heavy metals); reishii mushroom; Dried beans, lentils (vit B, antioxidants); cooked tomato paste (lycopenes); apple pectin; cilantro [from Greenville Ave Chiropractic, A comprehensive list is given in this blog post \(with good links to journal articles for each remedy\).](#), [Foods that fight cancer, lycopenes, Pectin](#)

More about food and water here:

[http://www.nukepills.com/docs/FEMA Nuclear War Survival.pdf](http://www.nukepills.com/docs/FEMA_Nuclear_War_Survival.pdf)

Print out [Chapter 9: Food NWSS](#)

Experts: <http://www.crcpd.org/ATeam/Atteam.htm> The Advisory Team for Environment, Food and Health from the EPA, USDA, CDC, FDA

• Preparing Emergency Supplies - from the CDC

<http://www.bt.cdc.gov/radiation/shelter.asp>

Food with a long shelf life—food for each member of the household for at least 3 weeks... Foods with a long shelf life includes ramen noodles (flavor packet expires), corn syrup, dried corn, corn starch, bleached flour sealed in an airtight bag, powdered milk sealed in an airtight bag. Foods that protect against radiation damage are listed above, but should be rotated according to expiration date. Primarily they include foods with betacarotene, curry/turmeric, baking soda, garlic, and vitamins like B,C,D. [See homeopathy vitamins](#) and [Food](#).

Water—1 gallon per day per person for 3 weeks

A change of clothes and shoes—underwear, socks, sturdy shoes, and seasonal clothes as needed

Paper plates, paper towels, and plastic utensils—you will not have enough water to wash dishes

Plastic bags—sturdy ones to collect bodily wastes

Bedding and towels

Small Battery-operated radio and batteries—listen to emergency messages/ conserve battery

Medicines—Have 2-3 weeks dose of your current prescription medicines in a labeled childproof bottle. Be sure to check the expiration date.

Toiletries—soap, hand sanitizer, toilet paper, deodorant, disinfectants, etc.

Flashlight and batteries or hand crank flashlight with cell phone charger.

A telephone or cell phone

Extra eyeglasses or reading glasses from the grocery store

Duct tape and heavy plastic sheeting—To seal the doors and any vents that open into your shelter for a short period of time if a radiation plume is passing over. 3 weeks of Pet food, baby formula, diapers, etc.

First aid kit—You can purchase a first-aid kit or prepare one yourself. Be sure to include the following items:

\_\_ Sterile adhesive bandages \_\_ Sterile gauze pads in 2 inch and 4 inch sizes \_\_ Adhesive tape \_\_ Sterile rolled

bandages \_\_ Scissors \_\_ Tweezers \_\_ Needle \_\_ Thermometer \_\_ Moistened

towelettes \_\_ Antiseptic ointment \_\_ Tube of petroleum jelly or other lubricant \_\_ Soap or hand sanitizer \_\_ Latex or vinyl gloves \_\_ Safety pins \_\_ Aspirin or aspirin free pain

reliever \_\_ Antidiarrhea medication \_\_ Laxatives \_\_ Antacids for stomach upset \_\_ Syrup of ipecac to cause vomiting if advised by the Poison Control Center \_\_ Activated charcoal to stop vomiting if advised by the Poison Control Center

Plastic bucket with lid, garbage bags with ties, bleach, soap, toilet paper, moist towelettes

Games, cards, books, and other entertainment (many of these things are sold at the dollar store).

Fact checking references:

Can we remove iodine-131 from tap water in Japan by boiling? – Experimental testing in response to the Fukushima Daiichi Nuclear Power Plant accident Chemosphere, Volume 84, Issue 9, August 2011, Pages 1282-1284 K. Tagami, S. Uchida ([link](#)) (NO you cannot)

Food safety regulations: what we learned from the Fukushima nuclear accident Original Research Article Journal of Environmental Radioactivity, Volume 111, September 2012, Pages 83-99

Nobuyuki Hamada, Haruyuki Ogino ([link](#))

[How to find a journal article](#)

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## First Aid

\*Note - the author of this site is not a medical physician. These pages are for educational, communication and information purposes only and are not intended to replace or constitute medical advice or treatments. Please see disclaimer below.

• [Burns](#)

• [Homeopathic treatments](#)

• [Basic First Aid Guide to download](#)

Print out [Chapter 13: First Aid NWSS](#)

Removing radiation: In a nuclear accident or bomb the public should take **shelter and shower** with (preferably ph balanced) soap or shampoo. Do not use conditioner since it can bind radioactive material to hair protein. **Clean and cover wounds first** before showering to prevent cross-contamination. Remove clothing (removes 90% of contamination) and store in plastic bag. ([See also: Sanitation section.](#)) If you cannot shower or remove clothing- cover your mouth and nose with a damp cloth and brush debris off until you can remove clothing. If you remove clothing and shower, (with soap) that removes about 90 - 99% of contamination. Wear a dust mask.

Fact checking references: Nuclear terrorism: triage and medical management of radiation and combined-injury casualties. (includes abstract)

Flynn DF; Surgical Clinics of North America, 2006 Jun; 86 (3): 601-36. ([link](#)), [quote](#) [How to find a journal article](#)

Main Medications: [Potassium Iodide](#) starting within first 4 hrs, [DTPA](#), [Prussian Blue](#), [Neupogen](#)

Hypothetical remedy not 100% proven to work (in lieu of potassium iodide pills): Apply 8 ml or 4x8" patch of 2% tincture of iodine to the skin of the abdomen in a hand sized patch. This technique resulted in an 82% reduction in the uptake of 131I by the thyroid gland. Iodine solutions are NEVER to be ingested or swallowed, and should not be used if allergic to iodine ([see ki4u](#))

For verification - see research done by Health Physicist Ken Miller, Hershey Medical Center ([link](#)).

It is not recommended to eat a lot of iodized salt as the iodine levels are not high enough and can be harmful. Do not drink topical iodine.

Fact checking references: [Table Salt from NPR](#) | [Effectiveness of skin absorption of tincture of I in blocking radioiodine from the human thyroid gland from the Health Phys Journal](#) | [Tincture of iodine keeps radiation away from Science News - possible home remedy in event of nuclear plant mishap](#) [How to find a journal article](#)

## Burns:

Research consistently advises to **cover burns with a clean, sterile, non-adherent dressing to protect the burn from the air and germs. Some recent research suggests applying topical antibiotics**, but older research recommends dry dressings. This is probably to prevent the application of butter, oil, cucumber juice or other salves / contaminants to burns (which increases [infection](#) risks – do not apply salves). The main goal is to prevent infection and protect the burn from the air. Infections are a major cause of mortality in the irradiated host because of immunosuppressive effects. It is important to pay attention to airway, breathing, and circulation. [This government website details recommended treatment of radiation burns](#). According to [REMM](#) the following short term treatment is recommended depending on the situation. Please consult with your physician before treating any injuries.

"[Advanced Burn Life Support](#) recommendations

- Cover wound with clean, dry sheet or dressing. NO WET DRESSINGS.
- Simple dressing if being transported to burn center (they will need to see the wound)
- Sterile dressings are preferred but not necessary
- Covering wounds improves pain
- Elevate burned extremities
- Maintain patient's temperature (keep patient warm)
- While cooling may make a small wound more comfortable, cooling any wound ... will cool the patient..."

Please see [REMM](#) for further information about long term care etc.

Fact checking: Nuclear terrorism: triage and medical management of radiation and combined-injury casualties by Flynn DF, Goans RE. ([link](#)) and [Diseases and Disorders](#), Marshall Cavendish Corporation, and Medical Treatment of Radiological Casualties: Current Concepts. Annals of Emergency Medicine V45,6. Koenig, Goans, Hatchett, Mettler ([link](#)). [CDC more details](#)

## Wounds:

Clean and cover any open wounds first to prevent cross contamination. If your skin is covered in radiation - you do not want water to carry radiation into any open wounds.

Cover wounds before cleaning other parts of the body. Wounds are a risk factor in spreading contamination. [\(CDC\)](#) "A person is internally contaminated if radioactive material is breathed in, swallowed, or absorbed through wounds." [\(HPS\)](#) "People who are internally contaminated can expose people near them to radiation from the radioactive material inside their bodies. The body fluids (blood, sweat, urine) of an internally contaminated person can contain radioactive materials. Coming in contact with these body fluids can result in contamination and/or exposure." [\(CDC\)](#)

[Homeopathic vitamins/remedies for the aftermath](#) (some not medically proven): [Bee Pollen](#), [Ginkgo](#), [Goldenseal](#), [Gotu Kola](#), Vitamin B and D, [Vitamin C](#) ([research](#)), [Bifidus](#), [Chlorella](#), Chlorophyll, [N-acetylcysteine \(NAC\)](#), [Superoxide dismutase](#), [Circumen \(curry or turmeric\)](#) ([research](#)) - AltCareDex Medicines May 1, 2008 pPE0331 [More herbs](#).

Sunflowers and marijuana are also used to remove radiation from soil in the aftermath. [You may view a more comprehensive list here.](#)

### **First Aid Manual you can download**

[http://www.au.af.mil/au/awc/awcgate/army/fm4\\_25x11.pdf](http://www.au.af.mil/au/awc/awcgate/army/fm4_25x11.pdf) .

Fact checking: Nuclear terrorism: triage and medical management of radiation and combined-injury casualties. (includes abstract) Flynn DF; Surgical Clinics of North America, 2006 Jun; 86 (3): 601-36.

Management of nuclear casualties. (includes abstract) Udeani JC; Topics in Emergency Medicine, 2002 Jun; 24 (2): 40-6, 79-82 [quote](#)

\*Note - the author of this site is not a medical physician. These pages are for educational, communication and information purposes only and are not intended to replace or constitute medical advice or treatments. Please see disclaimer below.

[Details - abstracts of medical articles](#)

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## **Sanitation**

Before you enter a shelter:

Remove the outer layer of your clothing first to reduce external contamination and length of time exposed. Place clothing in plastic bag or corner of room where people are not located.

Wash wounds first and then cover them with waterproof dressings before washing other parts to avoid cross contamination. Keep cuts and wounds covered and be careful not to damage the skin.

Wash all the exposed parts of your body with soap and lukewarm water. Avoid spreading contamination to parts of your body that were covered. You can cut hair and nails if appropriate. If possible shower and shelter. [Fact checking:](#)

<http://www.bt.cdc.gov/radiation/contamination.asp> See also [First Aid section](#)

Once inside the shelter set up a de-contamination area with a sheet in the foyer so that people can reduce the spread of radiation.

### **Supplies for sanitation**

Medium plastic bucket with lid, garbage bags with ties, bleach, soap, toilet paper, moist towelettes.

Build a makeshift toilet: place a garbage bag inside the toilet bowl or make your own with a bucket and 2 boards. After each use pour bleach into the container to avoid



infection. Cover when not in use. Dispose of waste in a pit away from any water supply. Alternately wrap in newspapers and store in large can with tight fitting lid and place outside.

Disinfectants: 1 part chlorine bleach to 10 parts water.

Intestinal Ailments: Keep body, hands and eating utensils clean, use paper plates or eat from original containers, wash and peel all fruits and vegetables, keep all food covered, prepare only what can be eaten at each meal.

Insects: Keep area clean, repair holes

From The Disaster Handbook, University of Florida Institute of Food and Agricultural Sciences

## Shelter – where is it safest?

In the event of a nuclear emergency, depending on the situation, the public response should usually be “**shelter and shower**” pending further instructions. [Evacuation](#) might be recommended later, but sheltering may result in lower radiation exposure (Flynn, 2006). If it is a nuclear power plant accident or the explosion of a radioactive dirty bomb, you may need to evacuate. If possible, bring pets inside. The three important factors are shielding, distance and time (from the blast). For information about deciding whether to shelter or [evacuate](#) see announcements from your [local government](#) and [this article](#). Some state by state general evacuation routes are listed at [USA Evacuation Routes](#). You can also check to see [nuclear power plant evacuation zones](#). [A table of criteria for deciding whether to shelter or evacuate is located on the NWSS chapter 4](#).

**Location within the building:** You want as much distance and the thickest barrier (walls) as possible between you and the radiation. **It is best to stay in a centrally located room (middle) or basement with few windows.** Some researchers contend that after the initial blast it may be safer to avoid the basement, roof, and anywhere contaminants may settle. It depends on if there is radiation in the air. The intensity of the radioactive fallout decreases gradually with time. You should not go outside unless a trusted media source tells you to.

**Fact checking:** <http://www.bt.cdc.gov/radiation/emergencyfaq.asp>, (Harrison et. al., 2003), <http://www.bt.cdc.gov/radiation/shelter.asp>

Shut off the AC or vents. Avoid ventilation blowers or pipes. If you must ventilate - then make sure the vent is not straight, but turns - as radiation does not flow around corners as well as air (according to the Facility Manager’s Emergency Preparedness Handbook). Close and lock all windows, exterior doors and openings to the outside. It is best to have a hard-wired phone in the room(s). If you have voicemail change the recording. Listen to the radio or TV until you hear it is safe.

**Best types of buildings:** Houses with basements, large multi story structures, closed parking garages, tunnels. Single story wood homes with no basements and cars/vehicles would be minimally adequate. You can build additional shielding into the outer walls if possible.

[Evacuation Plans and Procedures etool from the US Dept of Labor](#)

**If you are near the blast when it occurs:** Turn away, cover your eyes, - drop to the

ground face down and place your hands under your body. Remain flat until 2 shock waves pass. If you are outside find something to cover your mouth. Remove any dust from your clothes while covering your mouth and nose – then shower and shelter.

**OSHA advice for businesses if recommended to shelter:** Ask customers to stay, have them call their emergency contact, change the voice mail of the business, lock exterior doors and close windows, air vents, and fireplace dampers. Have employees familiar with your building's mechanical systems turn off all fans, heating and air conditioning systems, and clothes dryers. Close the window shades, blinds, or curtains; Gather essential disaster supplies; Select interior room(s) above the ground floor, with the fewest windows or vents; It is ideal to have a hard-wired telephone in the room; Consider using plastic sheeting to seal windows, doors, and air vents (without interior fumes); Write down the names of everyone in the room; Listen to the media for further instructions.

**Evacuation technique:** Travel at right angles to the fallout path away from the plume centerline (lateral evacuation). Take disaster supplies with you. Turn everything off and lock it up (including furnace). Assist the elderly and disabled. Fact checking: Planning Guidance for Response to a Nuclear Detonation by Federal interagency committee led by the Executive Office of the President & FEMA ([link](#)) and [bt.cdc.gov](http://bt.cdc.gov)

**Quotes from Analysis of sheltering and evacuation strategies** for a Chicago nuclear detonation scenario:

"The best strategy for any individual depends critically upon the nature of the fallout plume, the quality of immediately available shelter, and the ability to execute effective evacuation away from the most hazardous zones."

"The following are the principal findings of the analyses:

The recommendations of prior federal guidance were confirmed for the Chicago scenario. These include shelter-in-place when adequate shelter (protection factor > 10) is available, and early shelter transit or evacuation from inadequate shelter.

Out side exposure should be avoided during the first few hours following the detonation when the radiation hazards in the high dose rate zones are the highest. The only exception is for those in very poor shelter who should take the fastest path to better shelter.

The radiation protection capabilities of many structures in the Chicago region are quite good. If all residents in the hazardous fallout region adopt a shelter-in-place strategy, the total number acute radiation casualties is estimated to be ~3,600, as compared to ~100,000 casualties if all are outdoors and unsheltered. Some further reductions in casualties can be realized if those in the poorest shelters transit to better shelters soon after the detonation." (Brandt LD & Yoshimura AS)

<http://prod.sandia.gov/techlib/access-control.cgi/2011/116720.pdf>

According to one Chicago study there are several types of evacuation scenarios: Shelter in place in adequate shelter; Shelter transit or evacuation from inadequate shelter; Delayed transit in hazardous fallout regions ([p 31](#)).

Shelter-in-Place Followed by Early, Informed Evacuation; Extended Shelter-in-Place; Shelter-in-Place with early move to better shelter; Shelter-dependent transit or evacuation; Radial evacuation away from detonation location. ([p. 19, 20](#)) Details about each are found on page 19, 20, and 31 of <http://prod.sandia.gov/techlib/access-control.cgi/2011/116720.pdf>

[Nuclear Power Plant evacuation zones](#) | [CDC Evacuation Radiation](#) | [Article on Nuclear Evacuation zones](#)

[OSHA evacuation tool](#) | [Planning Protective Action Decision Making: Evacuate or Shelter in Place? 113 KB PDF](#)

Fact checking resource: Nuclear terrorism: triage and medical management of radiation and combined-injury casualties. (includes abstract)  
Flynn DF; Surgical Clinics of North America, 2006 Jun; 86 (3): 601-36. ([link](#))  
And [bt.cdc.gov](#)

Print out [Chapter 5: Shelter NWSS](#) and [Chapter 4: Evacuation](#)

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## Communication

The Emergency Alert System is a national and state-wide public warning system that allows presidential addresses to the American public over TV, cable and radio systems during emergencies. You should watch tv or listen to the radio for updates. Likewise your state troopers will also have information. Electromagnetic pulses may damage equipment, and battery operated radios are the safest source of information.

<http://www.fcc.gov/guides/emergency-communications>

You can find state by state information here:

<http://www.ibiblio.org/rcip/evacuationroutes.html>

National Hotlines for information:

- CDC at 1-800-CDC-INFO
- 1-800-BE-READY or 1-202-282-8000, 1-202-447-3543 TTY
- The Nuclear Regulatory Commission Office of Public Affairs can be contacted at 1-301-415-8200
- The Federal Emergency Management Agency (FEMA) can be reached at 1-800- 621-FEMA / TTY (800) 462-7585
- The Radiation Emergency Assistance Center/Training Site at 865.576.1005 (Ask for REAC/TS)
- The U.S. Department of Energy (DOE) at 1-800-DIAL-DOE

Ways to communicate and get information:

Skype <https://login.skype.com/account/signup-form>

Skype is the standard for free online phones. You can call other people with a skype account for free, but usually to call a normal phone number you need to pay for some minutes. It is helpful for calling family members without paying for long distance. You can also video chat. You will want to ask them what their skype username is.

Whistle phone <https://www.whistlephone.com/>

This phone is free for one month and it works. You can call a regular phone without paying extra. The only issue was that without a headset I had to press the mute button when the person was speaking to me or they heard themselves echoing through the speaker. Probably headphones would take care of that.

Find out what your local "alert" station is <http://www.theradiosource.com/articles-news-ears-across-america.htm>

Find your emergency radio station: <http://www.weather.gov/nwr/nwrbro.htm>

[You can also search for your local Highway Advisory Radio \(HAR\) set up by local transportation organizations.](#)

1610 AM radio for Louisville, KY

NOAA weather radio <http://www.nws.noaa.gov/nwr/streamaudio.htm>

TV – most tv stations have online videos you can watch for free. Hulu is a website that also hosts tv shows (including news), but there may be a longer delay than watching directly on the provider's website <http://www.hulu.com/genres/News-and-Information?type=tv>

[http://www.dhs.gov/xlibrary/assets/national\\_emergency\\_communications\\_plan.pdf](http://www.dhs.gov/xlibrary/assets/national_emergency_communications_plan.pdf)

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## Counseling and Coping Skills

- What is PTSD?
- How can I stop a panic attack?

What can I do now?

Remain informed; pay attention to emotional health; monitor physical health; focus on positive actions like taking inventory of emergency supplies and providing support to others; maintain contact with those around you; hold a picture in your mind of the best possible outcome; and maintain spiritual practices that provide emotional strength.

“Resilience factors that may reduce the risk of PTSD include:

- Seeking out support from other people, such as friends and family
- Finding a support group after a traumatic event
- Feeling good about one's own actions in the face of danger
- Having a coping strategy, or a way of getting through the bad event and learning from it
- Being able to act and respond effectively despite feeling fear.”

<http://www.nimh.nih.gov/health/publications/post-traumatic-stress-disorder-ptsd/what-are-the-symptoms-of-ptsd.shtml> The National Institute of Mental Health (NIMH)

- 6 steps to self control when dealing with panic attacks:

1/ Recognize that you are feeling anxious and accept your body feelings as a sign something is bothering you.

2/ Give yourself permission to feel anxious (of course you feel anxious and it's okay).

3/ Breath – inhale through your nose slowly for 2 seconds (one, one thousand, two, two thousand), exhale through your mouth for 4 seconds. Repeat for at least 60 seconds

4/ Use positive dialogue – “It's just anxiety. It will go away. I will not lose control. It won't hurt me.”

5/ Get busy – Do something to release this self induced stimulation. Walk, clean, organize. Distract yourself from how you are feeling.

6/ Try to see a little humor in the way you feel. Give yourself permission to feel weird for a little while. From The Midwest Center for Stress and Anxiety

[Read about specific psychological concerns for a radiation event.](#)

- Sample coping skills (until you can seek therapy with a licensed psychiatrist)

Safe place: Picture an imaginary place in your mind where you are completely safe.

This place should not be dependent on anyone else. It should be completely under your control. Only you decide who or what can get in or out of your safe place. Imagine the plants, smell, taste and touch.

Challenge negative thoughts: Ask yourself: Is this a productive thought? Is it helping me get closer to my goal? If it's just a negative thought you're rehashing, then you must be able to say to that thought: 'Stop.' "That's difficult to do, but it's very important," <http://www.webmd.com/anxiety-panic/guide/coping-with-anxiety?page=2>

Visualize a “container.” For me, this is usually a purple box. I imagine that I am putting the memories, or whatever was causing me mental pain at the time, into the box.

What is PTSD? from NIMH

<http://www.nimh.nih.gov/HealthInformation/ptsdmenu.cfm>

Post-Traumatic Stress Disorder, PTSD, is an anxiety disorder that can develop after exposure to a terrifying event or ordeal in which grave physical harm occurred or was threatened. Traumatic events that may trigger PTSD include violent personal assaults, natural or human-caused disasters, accidents, or military combat.

According to the The National Institute of Mental Health (NIMH)

“PTSD can cause many symptoms. These symptoms can be grouped into three categories:

1. Re-experiencing symptoms:

- Flashbacks—reliving the trauma over and over, including physical symptoms like a racing heart or sweating
- Bad dreams
- Frightening thoughts.

Re-experiencing symptoms may cause problems in a person’s everyday routine. They can start from the person’s own thoughts and feelings. Words, objects, or situations that are reminders of the event can also trigger re-experiencing.

2. Avoidance symptoms:

- Staying away from places, events, or objects that are reminders of the experience
- Feeling emotionally numb
- Feeling strong guilt, depression, or worry
- Losing interest in activities that were enjoyable in the past
- Having trouble remembering the dangerous event.

Things that remind a person of the traumatic event can trigger avoidance symptoms. These symptoms may cause a person to change his or her personal routine. For example, after a bad car accident, a person who usually drives may avoid driving or riding in a car.

3. Hyperarousal symptoms:

- Being easily startled
- Feeling tense or “on edge”
- Having difficulty sleeping, and/or having angry outbursts.”

<http://www.nimh.nih.gov/health/publications/post-traumatic-stress-disorder-ptsd/what-are-the-symptoms-of-ptsd.shtml>

The National Institute of Mental Health (NIMH) Recommended treatments from the Center for Anxiety and Traumatic Stress Disorders at MGH:

"There are a number of effective medications available to treat the symptoms of PTSD,

including antidepressants and some newer anti-anxiety or mood-stabilizing medications. Many individuals with PTSD do well with treatment that includes both psychotherapy and medication. Cognitive-behavioral therapy (CBT), including prolonged exposure (PE), Cognitive Processing Therapy (CPT), and Skills Training in Affect and Interpersonal Regulation (STAIR) is effective for many patients with PTSD and involve working closely with a therapist to systematically process the traumatic event, identify and modify negative thoughts that interfere with recovery from the trauma, and learn to face situations or feelings associated with the trauma. In addition, CBT helps individuals learn skills for managing difficult emotions and overcoming difficulties in interpersonal relationships."

How To Use Journaling to Cope with PTSD - In regard to PTSD in particular, expressive writing has been found to have a number of benefits including improved coping and posttraumatic growth.

<http://ptsd.about.com/od/selfhelp/ht/writing.htm>

Positive Coping Skills for PTSD:

Learning about PTSD, talking, relaxing,

Negative coping skills: alcohol or drug use, violence, anger, unhealthy eating.

<http://www.ptsd.va.gov/public/pages/coping-traumatic-stress.asp>

Coping skills for Trauma (quick fixes to stop a panic attack)

<http://www.ibiblio.org/rcip/copingskills.html>

Coping skills for anxiety for children <http://www.theplumtree.net/activities/>

Coping with worry and anxiety

[http://www.drbeckham.com/handouts/CHAP05\\_COPING\\_WITH\\_WORRY\\_AND\\_ANXIETY.pdf](http://www.drbeckham.com/handouts/CHAP05_COPING_WITH_WORRY_AND_ANXIETY.pdf)

PFA is a systematic set of helping actions aimed at reducing initial post-trauma distress and supporting short- and long-term adaptive functioning. PFA is designed as an initial component of a comprehensive disaster/trauma response, and it is constructed around eight core actions: (1) contact and engagement, (2) safety and comfort, (3) stabilization, (4) information gathering, (5) practical assistance, (6) connection with social supports, (7) information on coping support, and (8) linkage with collaborative services.

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## Research on Nuclear Radiation & Effects

### Best links:

Frequently Asked Questions About A Nuclear Blast

<http://www.bt.cdc.gov/radiation/nuclearfaq.asp>

How You Can Limit Contamination

<http://www.bt.cdc.gov/radiation/contamination.asp>

Nuclear blast from Ready.gov

<http://www.ready.gov/nuclear-blast>

### Good general overview information:

News & Terrorism Communicating in a Crisis - A fact Sheet from the national academies and the US department of homeland security - Nuclear Attack

[http://www.dhs.gov/xlibrary/assets/prep\\_nuclear\\_fact\\_sheet.pdf](http://www.dhs.gov/xlibrary/assets/prep_nuclear_fact_sheet.pdf)

[http://www.dhs.gov/xlibrary/assets/prep\\_radiological\\_fact\\_sheet.pdf](http://www.dhs.gov/xlibrary/assets/prep_radiological_fact_sheet.pdf)

Are you ready? Nuclear Blast

<http://www.ready.gov/nuclear-blast>

**More in-depth information:**

Planning Guidance for Response to a Nuclear Detonation by Federal interagency committee led by the Executive Office of the President & FEMA

[EPA](#) or [Search](#)

The Nuclear/Radiological Incident Annex (NRIA) to the National Response Framework (NRF)

[http://www.fema.gov/pdf/emergency/nrf/nrf\\_nuclearradiologicalincidentannex.pdf](http://www.fema.gov/pdf/emergency/nrf/nrf_nuclearradiologicalincidentannex.pdf)

Describes the policies etc of the Federal departments involving release of radioactive materials to address the consequences of the event.

Nuclear War Survival Skills from the Oregon Institute of Science and Medicine

<http://www.oism.org/s32p903.htm>

International Physicians for the Prevention of Nuclear War (IPPNW)

<http://www.ippnw.org/>

Conference of Radiation Control Program Directors

<http://www.crcpd.org/>

See link for publications

Radiation Emergency Management (game plans)

Population Monitoring Guide (how to manage a radiation emergency)

<http://emergency.cdc.gov/radiation/pdf/population-monitoring-guide.pdf>

Message templates for the first few hours of a nuclear weapon emergency

<http://www.bt.cdc.gov/firsthours/nuclearweapon/messages.asp>

Dirty bomb message

<http://www.bt.cdc.gov/firsthours/dirtybomb/messages.asp>

Responding to a Radiological Dispersal Device

<http://hps.org/homeland/documents/RDD-Handbook-ForWeb.pdf>

Emergency Communication and Information Issues in Terrorist Events Involving Radioactive Materials -

Trouble shooting the public's response to radiologic emergency procedures (instructions they don't understand or do not follow)

[http://www.bt.cdc.gov/firsthours/pdf/article\\_emer\\_comm\\_radioactive.pdf](http://www.bt.cdc.gov/firsthours/pdf/article_emer_comm_radioactive.pdf)

examples:

What does shelter in place mean?

Travelling to get children instead of sheltering in place.

Reactions of Prayer, helplessness, confusion, fatalism, or futility.

[RAD Resilient City - City preparedness for a nuclear situation](#)

[During a Nuclear Power Plant Emergency](#)

[State and Local Planners Playbook for Medical Response to a Nuclear Detonation](#)

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## **Hospital and health care provider emergency procedures**

**[Radiation Emergency Medical Management guidance on diagnosis and treatment for health care providers](#)** from the US dept of health and human services  
<http://www.remm.nlm.gov/>

The above website has well organized categories of information specifically for health care providers dealing with radiation and [radiation burns](#).

## **[Health Physics Considerations in Medical Radiation Emergencies](#)**

An overview of health physics in a radiological emergency (co-author Ken Miller also did studies on topical iodine and radiation uptake)

[http://hps.org/homeland/documents/Miller\\_Article.pdf](http://hps.org/homeland/documents/Miller_Article.pdf)

**Nuclear terrorism: triage and medical management of radiation and combined-injury casualties.** (includes abstract) Flynn DF; Surgical Clinics of North America, 2006 Jun; 86 (3): 601-36 ([link](#))

**Management of nuclear casualties.** Udeani JC; Topics in Emergency Medicine, 2002 Jun; 24 (2): 40-6, 79-82 ([link](#))

[State and Local Planners Playbook for Medical Response to a Nuclear Detonation](#)  
[Quotes from above articles](#)

Survival guides to download - these are the most comprehensive I have found.

**[Nuclear War Survival Skills](#)** is widely thought to be one of the best overall (free) guides to nuclear war survival. You can download a copy of [NWSS as a 27 MB PDF](#) from a number of [different sources](#).

NWSS is a published book by [Cresson H. Kearny](#) who has a BS in Civil Engineering from Princeton and an MS in Geology from Oxford University. NWSS was originally published by the Oak Ridge National Laboratory, a Facility of the U.S. Department of Energy.

It is available for [purchase](#), but also free to download as a pdf. The author worked for Oak Ridge National Laboratory at the time of publication. [More about Cresson Kearney](#)

"He was first of all concerned with expediency and with testing. He would only put his name on something that he knew worked and that would be of use by ordinary people without specialized equipment... He strove to be productive as long as he was conscious. His life was full of purpose; our survival, should the worst come to pass."

It is very comprehensive and has a lot of practical information for a person already involved in a nuclear / radiation incident. Since it is over 300 pages long I would recommend choosing select chapters to print out.

**Printing instructions:** It may be easier to just print from the menu of the website version.

Recommended chapters to start with:

[Chapter 5: Shelter](#) or [Ch 5 pdf](#)

[Chapter 8: Water](#) or [Ch 8 pdf](#)

[Chapter 9: Food](#) or [Ch 9 pdf](#)

[Chapter 13: First Aid](#) or [Ch 13 pdf](#)

[Index - See lower left menu](#)

[For the PDF:](#) See page 6 table of contents first (type 6 into adobe reader). If you click on the page numbers in the squares to the right - it will scroll to about the correct page



(you might need to scroll one page down because of the intro page). Ch. 5 Shelter, 8 Water, 9 Food, 13 First Aid.

If you are printing - be aware that the book page numbers do not match the pdf page numbers. You may need to add 7 to the page number listed in the book (upper left corner of white page) to equal the pdf page number (see upper left corner of computer screen next to the blue up & down arrows).

[Search for alternate download links](#). Also available from [Google books](#) and [Amazon](#). ISBN-10 094248701X ISBN-13 9780942487015

### **[Nuclear Detonation Preparedness - Communicating in the Immediate Aftermath](#)**

From the US Dept of Health and Human Services REMM.

#### **[FEMA Nuclear War Survival](#)** 1985

This is a fairly pragmatic guide intended for the general public. Probably not as comprehensive as NWSS, but a good comparison in case you are fact checking or looking for consistency.

#### **[Planning Guidance for Response to a Nuclear Detonation](#)** or [here](#) or [Amazon](#)

This guide is reassuringly linked directly from the EPA's website. It is, however, intended more for military training than for the general public.

#### **[Ki4u Guide on Nuclear Accident Preparation pdf](#)** or [html](#)

This is a good, brief guide on what to do just before and during a nuclear accident. It also covers appropriate sheltering techniques and supplies. This website in general is a good resource on nuclear preparedness, but not affiliated with any peer reviewed publication that I am aware of. The advice I have read on the Ki4u website is generally consistent with what I have read in federal government and peer reviewed resources (more so than other survival websites).

### **Bibliographies**

Radiation Protection Risk Assessment from the EPA

<http://www.epa.gov/rpdweb00/assessment/bibliography.html>

Radiation Injury bibliography for health care providers

[http://www.remm.nlm.gov/remm\\_SourcesofRadInfo.htm](http://www.remm.nlm.gov/remm_SourcesofRadInfo.htm)

Survive a nuclear blast list from Amazon

<http://www.amazon.com/gp/richpub/syltguides/fullview/1BJOO5YQ6VQMF>

List of the best survival guides

[http://www.slate.com/articles/life/shopping/2010/02/read\\_this\\_in\\_case\\_of\\_emergency.html](http://www.slate.com/articles/life/shopping/2010/02/read_this_in_case_of_emergency.html)

A comprehensive list of all prepper books

<http://www.wildriverroques.com/complete-list-of-every-prepper-book-ever-recommended/>

### **Research guides** (pathfinders):

<http://apus.campusguides.com/content.php?pid=339892&sid=2778483><http://libguides.riehmond.edu/content.php?pid=46420&sid=683518>

<http://www.hSDL.org/>

[http://www.lrc.fema.gov/path\\_nuclear.html](http://www.lrc.fema.gov/path_nuclear.html)

[http://www.lrc.fema.gov/path\\_ems.html](http://www.lrc.fema.gov/path_ems.html)

[http://www.lrc.fema.gov/em\\_hub.html](http://www.lrc.fema.gov/em_hub.html)

<http://guides.gulfcoast.edu/content.php?pid=256495&sid=2117112>

<http://www.ipnw.org/medicine-and-global-survival.html>

<http://www.radiationanswers.org/radiation-resources.html>

Radiation research - see articles, books, online resources and scientific reports

[http://libguides.broward.edu/nuclear\\_weapons](http://libguides.broward.edu/nuclear_weapons)

### **Books:**

[This is a good listing of books on nuclear survival](#)

[Nuclear War Survival Skills](#) by Cresson Kearney

[U.S. Army Survival Handbook](#) by the Department of the Army

[In Time of Emergency: A Citizen's Handbook on Nuclear Attack and Natural Disasters](#)

by the Department of Defense

[Life after doomsday: A survivalist guide to nuclear war and other major disasters](#) by

Bruce D Clayton

[Survival Guide: What to Do in a Biological, Chemical, or Nuclear Emergency](#) by Angelo

Dr Acquista

[U.S. Armed Forces Survival Guide](#) by John Boswell

[SAS Survival Handbook](#) by John Wiseman

This is a very good comprehensive, general survival book that covers many disaster scenarios. It focuses mainly on out of doors survival, and includes information about finding and purifying water. Page 556 - 560 has information specific to nuclear emergencies. Pages 561 - 571 cover sheltering in the home. I would recommend buying it if you are just going to buy one survival book.

[How to Survive the End of the World as We Know It](#) by James Wesley Rawles

[U.S. Armed Forces Nuclear, Biological And Chemical Survival Manual](#) by Dick Couch

(Author), John Boswell (Author)

[Stronger in the Broken Places](#) by James Lee Witt and James Morgan

This book is more of a guide on how to manage a group of people or a business during a crisis. It covers maintaining a positive attitude and avoiding blame. It is very well written. The author is a former FEMA director (prior to Katrina).

[Facility Manager's Emergency Preparedness Handbook](#) by Bernard T. Lewis and

Richard Payant page 220 – 224 details nuclear blast information. The rest of the book is about protecting your business from disasters.

### **Other US Government associated websites** on radiation emergency resources:

Ready.gov <http://www.ready.gov/document/be-informed-radiation-threat>

Center for Disease Control and Prevention: <http://www.bt.cdc.gov/radiation> ,

<http://www.bt.cdc.gov/radiation/healtheffects.asp>

Department of Homeland Security: <http://www.dhs.gov/index.shtm>

Department of Energy: <http://www.energy.gov/> .

Environmental Protection Agency: <http://www.epa.gov> ,

<http://www.epa.gov/radiation/all.html>

Nuclear Regulatory Commission: <http://www.nrc.gov>, FAQ page

<http://www.nrc.gov/about-nrc/emerg-preparedness/faq.html>

Federal Emergency Management Agency: <http://www.fema.gov> .

Department of Justice: <http://www.usdoj.gov> .

Federal Bureau of Investigation: <http://www.fbi.gov> .

Department of Health and Human Services: <http://www.hhs.gov> .  
Transportation Security Administration: <http://www.tsa.gov/public/> .  
National Nuclear Security Administration: <http://www.nnsa.doe.gov/> .  
Radiation Accident Assistance Center <http://orise.orau.gov/reacts/>  
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## Emergency Forms

Create forms to:

- Organize your information
- Contact information
- Radio frequencies to tune in (make your own)
- Medical information

Medical History forms:

<http://www.freeprintablemedicalforms.com/>  
<http://www.free-family-medical-history-form.com/>

HIPAA forms: <https://web.emmes.com/study/ped/resources/hipaasampleform.pdf>  
<http://www.aafp.org/fpm/2003/0200/p29.html>

Emergency contact forms:

<http://www.teachersprintables.net/category/emergency>  
<http://singleparents.about.com/od/homelife/a/emergency.htm>

Emergency family plan:

[http://www.ready.gov/sites/default/files/documents/files/Family\\_Emergency\\_Plan.pdf](http://www.ready.gov/sites/default/files/documents/files/Family_Emergency_Plan.pdf)

General forms templates:

<http://office.microsoft.com/en-us/templates/CT010104320.aspx>

Legal forms:

<http://www.library.unt.edu/research-tools/guides/law/reference-tools/forms-templates-and-model-documents>

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### Resources:

[How to find a journal article](#) - many of these articles can be found in databases intended for nursing students. Otherwise you can just search by the journal title in your library database. Most of them should be fully online.

Bairati, I. (2005). Randomized trial of antioxidant vitamins to prevent acute adverse effects of radiation therapy in head and neck cancer patients. *Journal of Clinical Oncology*, 23(24),: 5805-13.

Brandt, LD, Yoshimura, AS. Analysis of sheltering and evacuation strategies for a Chicago nuclear detonation scenario. Technical Report SAND2011-6720. Livermore, CA: Sandia National Laboratory. See <http://www.osti.gov/scitech/biblio/1029774>

Casavant M. (2006). Check emergency department victims for radiation. *Annals of Emergency Medicine*, 47 (1), 120-1. [Link](#)

Chase, M., Zimmerman, R. (2002). If 'Dirty Bomb' Hits, Hospitals Must Improvise. *Wall Street Journal - Eastern Edition*, 239 (114), pB1. 0p.

Flynn, D., Goans, R. (2006). Nuclear terrorism: triage and medical management of radiation and combined-injury casualties. *Surgical Clinics of North America*, 86 (3), 601-36. [\(link\)](#)

Funabashi, Y., Kitazawa, K. (2012). Fukushima in review: A complex disaster, a disastrous response. *Bulletin of the Atomic Scientists*, 68(2), 9-21. 13.

Hamada, N., Ogino, H. (2012). Food safety regulations: what we learned from the Fukushima nuclear accident. *Journal of Environmental Radioactivity*, 111 (September), 83-99 [\(link\)](#)

Harrison T., Gustafson, E., & Dixon, J. (2003). Radiologic emergency: protecting schoolchildren & the public. *American Journal of Nursing*, 103(5), 41-50. [link](#)

Jargin, S. (2012). Hormesis and radiation safety norms. *Human & Experimental Toxicology*, 31(7), 671-675.

Kinsley, M. (2006). Spare tactics: advances in radiation therapy include techniques that help keep surrounding tissue healthy. *Nursing Spectrum*, 18A (17), 10-1.

Koenig, G., Goans, R., Hatchett, R., Mettler, F., Schumacher T., Noji, E., & Jarrett, D., (2005). Medical Treatment of Radiological Casualties: Current Concepts. *Annals of Emergency Medicine*, 45(6). [Link](#)

Kumar, P. (1994). A review of triage and management of burns victims following a nuclear disaster. *Burns*, 20(5), 397-402. [Link](#)

Laurent, C. (1990). Disaster triage of massive casualties from thermonuclear detonation. *Journal of Emergency Nursing*, 16(4), 248-51.

(1985). Tincture of iodine keeps radiation away. (possible home remedy in event of nuclear plant mishap). *Science News*. Dec 7, 128 p360(1). [link to article](#)

Miller, K. (1989). Effectiveness of skin absorption of tincture of I in blocking radioiodine from the human thyroid gland. *Health Physics*, 56(6), 911-4. [link to article](#)

Schipper, D. (2005). Pills that protect you.(Cesium and Potassium iodide in radiography). *Men's Health*, 20(7), 138.

Splete, H. (2003). Handling a nuclear incident: potassium iodide. (Some Regional Distribution Plans in Place). *Internal Medicine News*, 36(8). p8(1).

Tagami, K., Uchida, S. (2011). Can we remove iodine-131 from tap water in Japan by boiling?. *Experimental testing in response to the Fukushima Daiichi Nuclear Power Plant accident Chemosphere*, 84(9), 1282-1284 [\(link\)](#) (NO you cannot)

Udeani, J., Aguilera, P. (2002). Management of nuclear casualties. *Topics in Emergency Medicine*, 24(2), 40-6, 79-82. [link](#) You might find this journal listed under Advanced Emergency Nursing Journal.

To purchase the Udeani and Aguilera article click <http://www.ovid.com> and under "Product Type", select "PayPerView", Scroll down and click on "Browse PayPerView Articles" and search for Management of Nuclear Casualties. Choose guest checkout. When you have the article save it to your hard drive - since it expires in a few hours. [Tutorial](#). (Apologies to P. Aguilera for the previous typo omitting his name.)

[SAS Survival Handbook](#) by John Wiseman

Online resources:

[American Red Cross](#)

[CDC](#)  
[FEMA](#)

[Nuclear War Survival Skills 27.2 MB](#) ([alternate link](#) - this takes a while to download and is about 28 MB), also [available in website format](#).

[FEMA Nuclear War Survival](#)

[Planning Guidance for Response to a Nuclear Detonation](#) or [here](#)

[Medline](#)

[Ready.gov](#)

[Details - abstracts of medical articles and citations. These may be of interest to medical professionals.](#)

Radiation Protectant Dietary References:

Websites:

[Extensive List of Remedies for Radiation from Greenville Ave Chiropractic](#)

[A list of herbs from radiation-remedies.com](#)

[A comprehensive list is given in this blog post \(with good links to journal articles for each remedy\).](#)

Articles in layman's terms:

Is beta-carotene a radiation protectant? Science News. 2/19/94, Vol. 145 Issue 8, p126. 1/9p.

"Finding that diets high in beta-carotene significantly reduce chromosome damage known as micronuclei in blood irradiated with X-rays."

Potential of herbs in skin protection from ultraviolet radiation Pharmacogn Rev. 2011 Jul-Dec; 5(10): 164–173.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3263051/> "Antioxidants such as vitamins (vitamin C, vitamin E), flavonoids, and phenolic acids play the main role in fighting against free radical species"

Radioprotective Potential of Plants and Herbs against the Effects of Ionizing Radiation.

J Clin Biochem Nutr. 2007 March; 40(2): 74–81. Published online 2007 March 14.

doi: 10.3164/jcbn.40.74 PMID: PMC2127223 "The results obtained from in vitro and in vivo studies indicate that several botanicals such as Ginkgo biloba, ... Panax ginseng, ... protect against radiation-induced lethality, lipid peroxidation and DNA damage."

From <http://www.washingtonsblog.com/2011/03/can-vitamins-or-herbs-help-protect-us-from-radiation.html>

RADIATION DIET. Rodale's Organic Gardening. Sep86, Vol. 33 Issue 9, p7-7. 1/3p.

"Assumes that plenty of fresh vegetables will be prescribed for the victims of the Chernobyl nuclear accident in the Soviet Union. Scientists' development of several diets based on the belief that specific nutrients minimize the health hazards from exposure to toxic substances; Vegetable content of ration number one designed to combat exposure to radioactive substances."

AltCareDex Medicines May 1, 2008 pPE0331

In regards to any material from Nuclear War Survival Skills (not the rcip website):

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of this copyright notice within quotation marks is printed along with the copyrighted material." <http://www.oism.org/nwss/index.htm>

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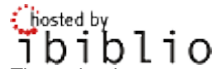
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