

# Radiation Fallout Protection

Protective and Extreme Measures – Power Plant Meltdowns to Weapon Contamination  
By Dr. Richard Brouse

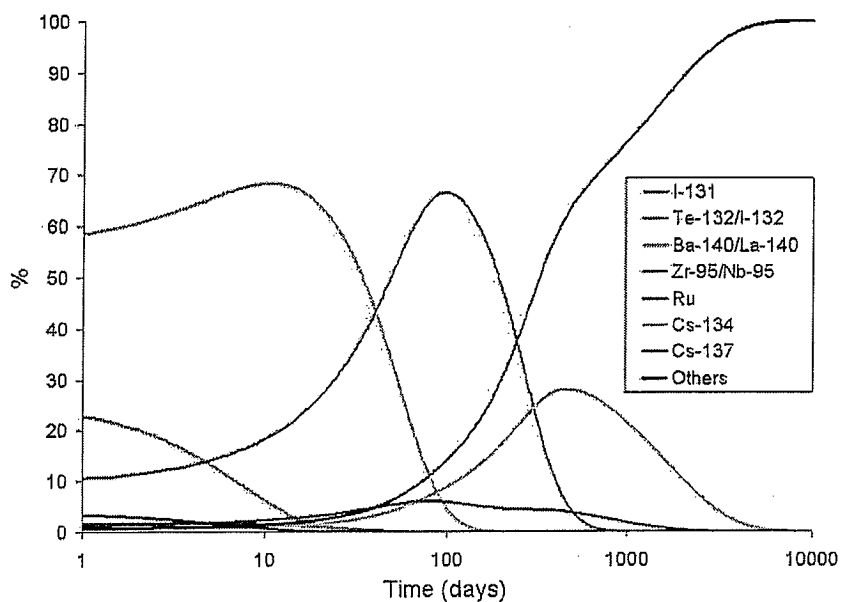
I am thankful that my masters degree minor was in nuclear chemistry. This was the biochemical technique of using radio isotopes use in studying metabolic pathways and nutrient distribution in the body. Before entering the service, I was accepted for a PhD candidacy at Simon Frazier University in Burnaby, BC but instead chose a position with the US Army Burn Research Center in San Antonio Texas for my 2 year duty. At the burn center, I used a number of radioactive isotopes for monitoring metabolic changes in animals that were exposed to stress. That background and my 34 years of clinical experience using nutrition – especially Shaklee supplements – has given me confidence in the body being able to prevent and throw off the damage that can come from nuclear fallout. It worked well for our patients who were living near the fallout from Chernobyl in 1986.

In the long term it is important to consider the protection which is offered by a person's home in the months and years after an event such as the Chernobyl accident our recently in Japan. We cannot wait until governmental agencies and the media tell us that the unexpected has happened. We must be prepared physically and biochemically. While the person's home may not be a purpose-made shelter, it can be thought of as a shelter if any action is taken to improve the degree of protection. It is also notable that most radiation shelters have a limited amount of oxygen, and should not be inhabited by one person for more than two weeks. The AirSource is essential at this time to reduce some of the particulates.

## Measures to lower the beta dose

**This graph shows the contributions made by the different isotopes to the dose (in air) caused in the contaminated area in the time shortly after the accident.**

The main threat from beta emitters is from *hot particles* which are in contact or close to the skin of the person.



Also a swallowed or inhaled hot particle could cause beta burns. As it is important to avoid bringing hot particles into the shelter, one option is to remove one's outer clothing on entry.

### **Measures to lower the gamma dose rate**

Twenty grams of kelp contains a sufficient daily dose of iodine to protect you from the Japanese radiation. It also contains the main nutrients essential for interactions with iodine, selenium, zinc, and iron, that allow iodine to function properly in thyroid metabolism. Because the half life of the escaped radiation is about 60 days, you need to take the kelp from today each day for 60-90 days. Also, a supplement called Iodoral gives added protection for adults and is essential for growing children. One tablet provides 7 mg of iodine in the form of potassium iodide.

The gamma dose rate due to the contamination brought into a shelter on the clothing of a person is likely to be small compared to gamma radiation that penetrates through the walls of the shelter. The following measures can be taken to reduce the amount of gamma radiation entering the shelter:

- Roofs and gutters should be cleaned to lower the dose rate in the house.
- The top inch of soil in the area near the house should be either removed or dug up and mixed with the deeper layers of soil. This reduces the dose rate as the gamma photons have to pass through the soil before they can irradiate a person.
- Nearby roads can be rinsed and washed down to remove dust and debris; the contaminated materials would collect in the sewers and gutters for easier disposal. In Kiev after the Chernobyl accident a program of road washing was used to control the spread of radioactivity.
- Windows can be bricked up, or the sill raised to reduce the hole in the shielding formed by the wall.
- Gaps in the shielding can be blocked using water cans, such as bottles of water. While water only has a density which is one tenth that of lead, it is still able to absorb gamma rays.
- Earth can be heaped up against the exposed walls of the building, this forces the gamma rays to pass through a thicker layer of shielding before entering the house.
- Nearby trees can be removed to reduce the dose due to fallout which is on the branches and leaves. It has been suggested by the US government that a fallout shelter should not be dug close to trees for this reason.
- Vitamin C, Immunity Formula I and Alfalfa are very helpful in reducing the effects of gamma radiation.

## Different types of radiation emitted by fallout

### Alpha

In the vast majority of accidents and in all atomic bombs the threat due to beta and gamma emitters is far greater than that posed by the small amount of alpha emitters in the fallout. Alpha radiation can be very harmful, but only if radioactive materials are ingested or inhaled. Alpha particles can be blocked easily by a sheet of paper. Stocking up with a stored 2 week supply of clean food and water is essential. Get Clean water along with Herb Lax, Instant Soy Protein and Fiber Advantage Bar offers great protection

### Beta

It is likely that even a light structure will give good protection against most beta emitters, but small particles of fallout can cause localised radiation injuries known as beta burns. It is thought that if a person entering a fallout shelter was to change their footwear and leave their outer clothing outside the main area then the persons inside will be protected from these beta burns. Beta rays are more penetrating than alpha rays, but internal exposure will tend to do less damage because the LET (linear energy transfer) is lower. Vivix, Alfalfa, B-Complex and Liver DTX are helpful for reducing the effects of beta radiation.

Three centimeters of aluminum can block the beta emissions from even a high energy beta emitter such as  $^{90}\text{Sr}$ , while a lower energy beta emitter such as tritium or  $^{14}\text{C}$  will be stopped by thinner objects. Osteomatrix and Vita-D3 are extra helpful in reducing effects from these isotopes.

### Gamma

These are not charged particles but electromagnetic rays, and are thus more able to pass through objects and may pose a great threat to a person in a fallout shelter. Most of the design of a fallout shelter is intended to protect against gamma rays. The rays' intensity can be reduced by dense materials such as lead, steel, concrete or packed earth. Osteomatrix, Zinc, Iron plus C and Carotomax are helpful to protect cells against gamma radiation.

Dr. Richard Brouse has used Shaklee supplements for health protection and disease prevention since 1971 for himself and his family and in his practice since 1977. Global disasters like the one currently in Japan may become more frequent as our delicate balance with nature is disrupted. The wise person will apply gained knowledge before the crises to prevent the thousands or millions of casualties that may result from this unexpected disaster.