

# Radiation and Supplements

more information on the following links:

<http://www.rifeenergymedicine.com/Radiationprotection.html>

<http://www.ki4u.com/guide.htm>

Potassium Iodide: Of course, most everyone knows this one. This can protect the thyroid gland by saturating the thyroid with iodide so it cannot absorb radioactive iodine. However, the whole body should be treated because if the thyroid is being contaminated, so is the whole body.

"The idea of stockpiling the drug, potassium iodide, has been debated since the 1979 accident at Three Mile Island, near Harrisburg, Pa. Proponents renewed discussions of the proposal after the explosion of the Chernobyl reactor in the Ukraine, a 1986 accident that is now blamed for thousands of thyroid cancers, mostly in people who were in utero or younger than 2 years old at the time. Those people, regardless of their age, who took potassium iodide at the time, were protected."

"But the new recommendation is far more complex, establishing different recommended doses and different conditions for use for eight categories of people: newborns; infants younger than 3 years old; children 3 to 12; youths 12 to 18; adults 18 to 40; adults older than 40; and women who are lactating or are pregnant.

For those younger than 18 and for pregnant or lactating women, the F.D.A. will recommend giving the drug at a level of radiation exposure a fifth as large as advised in the 1980's."

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<http://www.commondreams.org/headlines01/1129-03.htm>

this confusing mish-mash means, if you get sufficient iodine in your diet, you should be protected. Even if exposed, organic iodine can actually remove radioactive iodine that has lodged in the thyroid gland. More dose info below under Kelp and Sea Vegetables.

RDA recommendations for all supplements are extremely low according to recent research. There is evidence that supplementing our nutritional deficiencies with therapeutic dosages where the diet is based mainly on processed, packaged foods would be a more prudent choice. It is also a concern that our soils are depleted of the much needed minerals to produce foods that properly nourish and equip the body's ability to adequately heal itself from the daily toxins ingested from our air, water, and food. Organics should be eaten whenever available and possible.

Taking a whole body approach to radiation exposure is necessary to strengthen the body's immune system and this can be done successfully using whole foods and some supplementation. Don't panic, be prepared. This is something everyone should be doing and not waiting until the crisis is upon us.

## NATURAL OPTIONS:

**VITAMIN C:** This may be the most important thing of all to have on hand for many applications, e.g. poison, bites, viruses, etc. Vitamin C cannot only protect against radiation but also repair damage from previous exposure. This should be taken frequently throughout the day.

**Vegetable Oil:** Extra virgin olive oil but any cold pressed, extra virgin oil will do in an emergency. If you are exposed or are going to be, you can drink a half cup and it will help supply protection for the cell membranes. (I got this from the Atomic Energy Commission Report many years ago but it still is true.) Some studies show that applying these oils to the skin can help protect against radiation skin burns. Vitamin E oil applied to the skin, along with Vitamin C and aloe vera could help mitigate radiation burns.

**Pantothenic Acid:** Prevents radiation injuries. In animal studies, the survival rate was increased by 200 per cent by giving Pantothenic acid prior to exposure. Brewer's yeast is by far the best source of this substance. Dose: Preventive-5 mg. to 15 mg. for children, 25 mg. to 50 mg. for adults. Use a double or triple dose as a therapeutic after exposure.

**Brewer's Yeast:** Believe it or not, brewer's yeast can help protect and repair damage from many types of radioactivity.

**Lemon or lemon peels concentrate (bioflavonoid).** It is always good to take Vitamin C and bioflavonoid together since the latter multiplies the effect of the C.

**Lecithin:** 2-3 tbsp. a day will help counteract the effects of radiation.

**Kelp:** Supplement the diet with easily absorbable organic iodine, as in kelp (Norwegian or other clean water kelp if possible); this will saturate the thyroid so radioactive iodine will not be absorbed. (It, like all sea vegetables contains an amazing substance called sodium alginate which we will get to later.) Dose: 1 to 2 tsp. Of granules daily, or 5 to 10 tablets. Protective program for Strontium-90.

**Calcium and Magnesium:** both help your body to pass off Strontium 90. Get supplement not made from animal bones which contains Strontium 90. Dolomite is best. Dr. Linus Pauling says heavy calcium supplementation will reduce strontium 90 absorption by 50 percent, but be careful not to over indulge unless exposed. Vitamin D3 is needed for the calcium to be picked up by the body and magnesium is needed for the body to properly utilize the calcium.

**Sea Vegetables:** Sodium alginate is one of the more powerful protective substances in sea vegetables like kelp, which includes arame, wakame, kombu, and hijiki. Sodium alginate reduces the amount of strontium-90 absorbed by bone tissue by 50 to 83 percent. (You can also obtain a great source of this in a fantastic herbal combo by Solaray called Detox Blend SP-25.)

**Fermented Foods:** Due to their multiple beneficial effect on the intestines, fermented foods help to counteract the toxins from radioactive fallout that is ingested from foods, e.g. yogurt, sauerkraut, kefir, etc.

Beets have been shown to rebuild hemoglobin of the blood after exposure to radiation. Rats fed a diet of 20 percent beet pulp were able to prevent cesium-137 absorption and 97 to 100 percent more effectively than rats given no beets.

Primary-grown Nutritional Yeast: Besides having Vitamin E, also contains the nucleic acids RNA and DNA, both of which have been shown to have radio protective qualities. It has been shown to help rebuild and regenerate cells damaged by radiation, and also to produce relief from radiation poisoning and it's many horrible symptoms. Nutritional yeast has a good amount of many important nutrients. Primary-grown yeast binds with and absorbs heavy metals such as uranium, lead and mercury! Primary-grown yeast is cultivated for its own nutritional components rather than a by-product from another industry, such as, brewing.

Garlic and Onions: Cysteine, also present in onions, binds with and deactivates both the radioactive isotopes and toxic metals such as cadmium, lead and mercury. The sulfur in Cysteine helps the kidneys and liver detoxify the body. Garlic has many wonderful healing properties and should be researched.

Chlorophyll: Lourau and Lartigue reported that green cabbage increased the resistance of guinea pigs to radiation. The US Army found that broccoli, green cabbage and alfalfa reduced the effects of radiation on guinea pigs by 50 percent! (You can get a good organic alfalfa pill very cheap from Nature's Plus.)

Oils: Dr. James Ashikava found that mice will survive normally lethal doses of x-rays if they are given common edible unprocessed vegetable oils-especially olive or peanut oils. It is reported from Mexico, that those who work or live near sources of radiation, such as atomic labs or nuclear power plants, eat or rub vegetable oils on their skin for greater protection.

In one mice study, olive oil taken internally fully protected rats against progressive doses of x-rays ranging from 300 to 2,400 roentgens. The olive oil provided optimal protection when it is comprised about 15 percent of the total calories of the diet. Buy olive oil only in dark bottles because light breaks down the oil, which makes the oil rancid sooner.

Vitamin A: In 1974, researchers from India found that vitamin A, when taken internally by humans, hastened recovery from radiation. In 1984, Dr. Eli Seifter and a team of researchers from the Albert Einstein College of Medicine reported vitamin A and beta-carotene counteracted both partial and total body gamma radiation. It also improved the healing of wounds; reduced weight loss, thymic and splenic atrophy, and adrenal enlargement; and prevented gastro-ulceration and an abnormal decrease in red and white blood cell formation. (The therapeutic purposes, 25,000 to 35,000 IU are recommended for adults. During emergencies or crisis situations, intensive exposure may warrant as much as 40,000 to 100,000 IU of beta-carotene, but should be taken for no more than three to four weeks. Infants should not consume high amounts.

Vitamin B Complex: There are so many benefits to the B vitamins that there is not enough space to list them. One of the many is they normalize the red and white blood cell count, because the destruction of white blood cells by radiation can last for extended periods of time. The various B

vitamins have different effects and should be taken together.

**Vitamin C and Bioflavonoid:** Not to be redundant; researchers at Harvard Medical School said, "Our experiment showed that vitamin C can prevent damage from radiation, it somehow keeps the radiation from killing the cells." Their experiment indicates that the dosage for humans exposed to intensive radiation would be approximately 10 grams per day---a mega dose. (More about C and radiation later from Dr. Thomas Levy). The literature must be studied before mega dosing but levels up to 50,000 and more have been administered for short periods with good results. If more than 750 mg. of vitamin C is taken daily, calcium, magnesium, B6 (within the whole B complex), and sufficient water to prevent kidney stones. The body cannot store much C and it is used for darn near everything in the body, so make sure you get enough.)

**Vitamin D3:** An adult therapeutic dose would range from 2000 IU per day to 5,000 IU daily. During an emergency, adult daily dosage could go as high as 50,000 IU, if taken for no longer than one month and no sun exposure is available. People in the northern hemisphere should be supplementing with D3 from fall to spring due to the reduced sun exposure in higher amounts then reduced from spring to fall according to summer activities.

**Vitamin E:** It can protect against the effects of x-rays and radioactive cobalt. It improves anemia following exposure to radiation. It can provide internal and external protection against cesium-137 which is a common component of fallout and nuclear power plant leaks and routine emissions. For the form of E d-alpha-tocopherol, an adult weighting about 155 would need about 900 IU per day. (I take more than this every day normally. On exposure, I would take 1600 IU as I have many times for several weeks. I prefer to get the dry, water dispersible E, but any kind is good as long as it is fresh. The oil can go rancid. Also, try to get the most natural form.) E also helps prevent the destruction of Vitamin A and fatty acids by massive doses of x-rays. If large doses of C, B and E are taken before exposure, the terrible symptoms of radiation sickness can be reduced or eliminated to a large degree. Caution: E should be used cautiously if you have high blood pressure or rheumatic heart disease or on blood thinning medicines.

**Calcium:** By the mechanism of selective uptake, calcium blocks or decreases the absorption of strontium-90, calcium-45 and other radioactive isotopes by the skeletal system. Calcium also helps to eliminate radioactive isotopes that are lodged in the bones! The National Research Council recommends that adults consume 800 mg. of calcium per day. For children and lactating women this is 1,000 mg. and 1,400 mg. Too much calcium can be harmful. The best forms of supplemental calcium are calcium citrate, gluconate, carbonate, lactate, or amino acid chelated calcium. It is good to take a calcium-magnesium combination.

**Magnesium:** Like calcium, magnesium prevents the uptake of radioisotopes and helps to eliminate already stored strontium-90. One reason not to use synthetic vitamin D (Calciferol) is that it can combine with magnesium and carry it out of the body. Calciferol is contained in much commercial milk. Fluoride also leaches calcium from the body among other horrendous things. The optimal diet should contain about ½ as much magnesium as calcium. The RDA for calcium is 350 mg. to 700 mg. The high end should not be exceeded but since the Standard American Diet or SAD does not supply enough magnesium, supplements are recommended.

**Selenium:** Wonderful element. Does so many positive things impossible to list. It fortifies the immune system, reduces the rate of cancer in humans and helps to alleviate leukopenia, (abnormal decreases of white blood cells). The RDA is 50 to 200 micrograms per day. Some recommend as much as 100 to 300 micrograms per day, but more should be under medical supervision. It is most effective when taken with vitamins A and E.

**Potassium:** If there is a deficiency, radionuclides like cesium-137, cesium-134, potassium-40 and potassium-42, are absorbed through selective uptake etc. RDA is uncertain but health authorities suggest a minimum of 2,000 to 6,000 mg. in the diet. Usually supplementation is not necessary and too much can be dangerous. Usually sufficient potassium can be obtained from the diet.

**Zinc:** A diet that supplies sufficient zinc blocks the uptake of radioactive zinc-65. Zinc DTPA has been used to chelate americium-241 from a nuclear accident victim. Natural zinc also will help the body eliminate several toxic heavy metals including cadmium, aluminum, lead, and excess copper. Although doses over 50 mg. per day have been used it should be under a doctor's care.

**Iron:** A number of studies indicate exposure to radiation significantly decreases levels of iron in the body. Radioactive iron and plutonium, isotopes similar in structure to iron, can be carried to iron storage sites such as liver, bone marrow, ovaries or testes, and lungs if the body is deficient in iron. The National Research Council recommends a daily intake of 18 mg. for women, 30 to 60 mg. daily if pregnant or more if lactating; 10 mg. for men, and 10 to 18 mg. for children. After exposure to radiation or loss of blood, supplementation of approximately 10 to 18 mg. daily.

**Siberian Ginseng:** *Eleutherococcus senticosus* is the best for medicinal purposes. Soviet researchers reported that eleuthero extract has radio protective qualities, and can be used in conditions of acute or chronic radiation sicknesses such as hemorrhaging, severe anemia, dizziness, nausea, vomiting and headaches due to x-rays. It can lengthen survival time after exposure. The list is too long. Do some research. It is almost miraculous protecting against infections. It increases human resistance to a remarkably wide variety of stressors. Adult extract treatment doses: 20 to 40 drops before meals, two or three times per day. Children: single dose one drop per each year of age, repeated twice a day.

**Panax Ginseng:** Studies have found this Asian version is effective against radiation as well. Researchers observed ginseng increases the rate of production of serum albumin and gamma-globulin as well as DNA and RNA protein, and lipid synthesis in bone marrow cells. Also, human subjects taking ginseng root were able to acclimatize more easily to oxygen-deficient air. Both types can be taken daily as they build up in the body in a positive way. Best to take small amounts over a long period.

**Aloe:** Of the more than 200 species of Aloe, these species have shown evidence of being radioprotectants: *aloe barbadensis* (aloe vera), *aloe arborescens*, *aloe striatula*, and *aloe saponaria*. Emulsions can prevent the development of local reactions in radiation therapy and treating radiation burns of second and third degrees. Aloe also accelerates the process of tissue repair and normal cell growth. It is optimal to use its fresh form direct from the juicy leaves of the plant. It

also has pain-relieving properties. Use fully mature leaves from outer leaves first.

Chaparral: Also known as the creosote bush, one of the active ingredients is NDGA. One thing it does is inhibit the tumor electron transport system, which denies such growths the electrical energy they require. It also corrects malignant melanoma in many cancer patients. Chaparral is an excellent antibiotic and helps purify and detoxify the blood. Use with caution and supervision. Dose: If taken in tablet form take an extra 300-750 mg. of vitamin C per day to help the body process the concentrated resins and gums in the herb.

Cysteine: A natural amino acid helps counteract several kinds of radiation. Caution: Do not take as a separate supplement. Can be a dangerous excitotoxin like glutamate (MSG) or aspartate in abnormal quantities. Occurs in sulfur containing vegetables most of which are in the cabbage family. Kale is by far the best source with watercress and brussel sprouts good sources too. Make sure you get non-irradiated vegetables. Whole food is always the best way to nourish the body.

Pectin: Obtained from ripe fruit like apples. Like sodium alginate in agar and kelp, pectin bonds or chelated with radioisotopes, especially strontium-90, and reduces the absorption into the skeletal system.

Papain: In one study, 50 percent of the rats given papain survived a normally lethal dose of radiation.

Medicinal Charcoal: Has the ability to absorb and neutralize radioactive substances and some toxic materials. Researchers report that 10 grams or 1 tablespoon of charcoal can absorb about 3 to 7 grams of materials.

Organic Germanium: Ge-132, according to one study, "Radioactive rays release electrons that destroy cells and blood corpuscles. Germanium floating near the blood corpuscles skillfully catches those released electrons and lets them move around its nucleus." In other studies mutagenesis of cells exposed to cesium-137 and gamma rays, was "remarkably reduced" without affecting cellular growth or survival. It seemed to improve the fidelity of DNA replication. Ge-132 protects cysteine, an amino acid with known protective value. Dose: 25 mg. to 100 mg. per day is often used in Japan. It can be derived from onions, pearled barley, and watercress.

Sodium Alginate: An effective preventive and therapeutic substance against radiation and heavy metals according to Tanaka. In two experiments using rats, sodium alginate decreased by a factor of 12, the uptake of several radioactive isotopes-including strontium-90, strontium-85, barium, radium, and calcium. Skoryna et al. concluded that ingestion of small but regular doses of alginate is effective in preventing the daily absorption of small doses of radioactive strontium and other contaminants that are present in the environment. Brown sea vegetables such as kelp are the most effective sources.

Alginate is nontoxic and is not reabsorbed for the GI tract and appears to have no adverse effects even at high doses. Red sea vegetables, such as dulse are most effective at binding plutonium and green algae binds cesium most effectively.

Dose: The Atomic Energy Commission recommends for maximum protection against radioactive

poisoning for humans, taking a minimum of 2 to 3 ounces of sea vegetables a week or 10 grams (two tablespoons) a day of sodium alginate supplements. During or after exposure to radiation, the dosage should be increased to two full tablespoons of alginate four times daily to insure that there is a continual supply in the GI or gastrointestinal tract. There may be a rare problem of constipation but this can be avoided if the sodium alginate is made into a fruit gelatin. Agar, derived from sodium alginate in kelp, is a safe, nontoxic substance that can be used as a thickening agent or gelatin. (Solaray has a great product called Detox Blend)

Another benefit of sea vegetables is the natural iodine. If there is insufficient iodine in the diet radioactive iodine-131 will be absorbed and collected in the thyroid gland. Even if radioactive iodine is absorbed by the thyroid, taking natural iodine helps offset the side effects of exposure. According to Dr. Russell Morgan, one mg. of iodine for children and five mg. for adults taken daily will reduce by about 80 percent the radioactive iodine accumulated in the thyroid. Whole foods are the best source of iodine, e.g. sea vegetables like hijiki, arame, kombu and dulse. Iodine is leached from the thyroid gland by drinking chlorinated water. Avoid iodized salt which contains excessive sodium and no potassium. Sea vegetables are rich in vitamins and contain most if not all of the essential minerals and trace elements. Sea vegetables also help dissolve fat and mucus deposits.

**Chlorophyll:** A number of studies found that chlorophyll-rich foods can decrease radiation toxicity. Spirulina and chlorella are two micro-algae that are rich in this substance, as are leafy greens, celery, parsley, the sprouts of any grain or bean, the young shoots of any edible grass and sunflower greens. Chlorophyll is similar in structure to hemoglobin.

In closing,

As you see, our Creator provided all our nutritional and medicinal needs to provide us the best possible health. Health should be a daily thought, and not left to only a time of crisis because by then more damage can take place than need be if proper nutrition has been adhered to in preventative health measures.

God bless,

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