

Responding to the Effects of Nuclear Radiation

Anthroposophic Medicine's Potential for Healing

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As of April 10, when I write this, most of the world has experienced a sort of fire drill, rather than the full-scale tragedy that Japan has endured as a result of last month's earthquake and tsunami. Japan's remarkable ability to safeguard, organize and endure is incredibly taxed by this challenge. Their suffering becomes teaching for the world and hopefully, we will be serious students. Physicians and laypeople alike wonder how we can mitigate the effects of nuclear exposure. Fortunately, many people and organizations have shared practical ideas related to nuclear radiation exposure and our future as one world.

The Foundation of Action is Reliable Information: What is the Level of Risk?

The Nuclear Information and Resource Service (NIRS) collects information from independent monitors around the world and highlights commonly accepted studies that have overlooked risk and little-known industrial practices which add to known risks.

For example, United States radiation protection standards make the assumption that the individual exposed to harmful radiation is an adult male. Women, children and fetuses are known to be more susceptible to radiation's harmful effects, but standards have not taken this into account. The very use of the terms "acceptable" or "standard" only means that a number has been agreed upon for action or inaction. In fact, the National Academies of Science BEIR VII Report (2005) found data suggesting that low-level radiation has a "linear, no-threshold risk," which means even the smallest dose of radiation has the potential to cause harm to human health. Please see Physicians for Social Responsibility's website for this information, as well as a full discussion of types of radiation, the mechanism of damage and the relative doses received by patients from medical radiation.

If you are near a nuclear plant, ask your county to report regularly on air and water radiation levels, since historically small "routine" releases of nuclear waste from still-functioning nuclear facilities have occurred under the cover of a larger nuclear event. Also, consider signing up for email updates from NIRS, Union of Concerned Scientists or Physicians for Social Responsibility.

Support objective sources of information on nuclear effects and ongoing efforts to collect information. In "Half Life of a Disaster: Chernobyl's Struggle Offers Lessons for Japan," Mark Peplow highlights the lack of follow-up studies which could have been done on the effects of low-level radiation over time following Chernobyl's meltdown and on best practices in decommissioning nuclear reactors. In "Conflicting Mandates, Co-Opted Studies: Atomic Energy Agency and the World Health Organization," Cindy Folkers explains that the International Atomic Energy Agency (IAEA) lists its mission as follows: "To accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world." In other words, for the IAEA to continue to exist, it must promote the notion that nuclear power contributes positively to health. Though the IAEA has no mandate to directly protect health or to perform health studies, it is conducting health studies that the World Health Organization (WHO) relies upon in preference to independently produced studies. The WHO and the IAEA have also agreed to safeguard confidential information, limiting full disclosure of relevant health information.

Where in the Environment is the Radiation Concentrated?

For North America, attention can be paid to the following at this time, since levels have not been high enough for evacuation, according to NIRS. The information is most relevant for the West Coast of the United States.

Rain carries radioactive particles to earth. If you get wet, wash your clothing promptly and take a shower. Leave outerwear and shoes at the door. Do not collect rainwater for drinking or later garden use during the period of time when active distribution of radioactivity is happening.

Well water is not likely to contain radioactivity until the "recharge" period has passed and the natural filtering of the earth will likely reduce the level of radioactivity.

Municipal water radioactivity level ideally would be monitored regularly and reported to the community.

Foods most likely to concentrate radioactivity include dairy products, meat, fish, eggs, nuts, seeds and oil. Processed foods often contain oils. Bread found on today's store shelves was made with grains that were grown some months ago. Canned fish from the Pacific currently for sale may be of different quality than what will be available to consumers in the future.

What Are the Radioactive Elements of Concern and Why?

Iodine 131 is concentrated by the thyroid gland and secondarily, the breast tissue. The young and those who are iodine-deficient are more vulnerable to radioactive iodine. Potassium iodide is well established as the high-dose (approximately 100 times minimum daily requirement) emergency treatment to protect the thyroid gland from acute significant radioactive iodine exposure. An excellent article on using it correctly is offered by Robert Gilbert, PhD of the Vesica Institute, who cautions against using potassium iodide inappropriately. Thomas Cowan, MD, San Francisco physician and author of *The Fourfold Path to Healing* echoes this caution in his recent newsletter. In the newsletter, Dr. Cowan points to the benefits of general protective measures such as fermented cod liver oil, high quality food in the diet, magnesium through epsom salts baths, Vitamin C, and seaweed containing fucoxanthin. Maine Seaweed produces a soup mix containing seaweed sources of fucoxanthin and iodine, one tablespoon per day for adults providing the ideal basis for health.

These lifestyle and diet measures may be used immediately to begin to replace any iodine deficiency one might have. Iodine deficiency is common these days, because fluoride and chlorine in drinking water compete with iodine, as does bromide, which is used as a flame retardant in furniture and rugs and a preservative in flour. Iodine, bromine, fluorine and chlorine are all halogens. Our environment exposes us to relatively more of the latter three than the iodine which our thyroid and breast tissue need. Iodoral is a long-used iodine supplement. Magnascent iodine is liquid, readily absorbed, easily dosed and tolerated at all ages. Doses should be provided by your personal physician, based on your health picture, since a thyroid nodule or other thyroid condition may require caution with supplemental iodine.

Cesium 137 is believed to concentrate in muscle (then bone and fat) and if significant amounts enter the sea, the fish muscle would likely carry it. With a half-life of 30 years, it would be "gone" (or 1/1000 of its original concentration) in 300 years. Buying canned fish today may be a good idea. Vital Choice is recommended by Andrew Weil, MD and Monterey Bay Aquarium for high-quality, sustainably harvested fish. The main elements in the same family as Cesium are sodium and potassium. While

nothing is offered as specifically protective against Cesium 137, organic and biodynamic vegetables and fruits and sea salt are healthy sources of sodium and potassium.

Strontium 90 concentrates in bone. Non-radioactive strontium is used to treat osteoporosis. While I have not heard of using strontium as protection against radiation, it is possible to consider a high-quality supplement in ordinary doses given the current situation. Vital Nutrients is a leader in quality standards in the supplement industry. Calcium, magnesium, and radium are in the same family of alkali earth metals as strontium. Magnesium sources, such as epsom salts, magnesium chloride baths or topical magnesium chloride spray are safe and valuable for overall health. Magnesium deficiency is widespread, given poor soil replenishment and our habitual use of mildly diuretic drinks like caffeine and alcohol.

Plutonium 239 has a half-life of 24,100 years. If inhaled in large doses, lung cancer can result. In the body, bone and liver are sites of concentration. Plutonium turns to radium, which is part of the strontium – calcium – magnesium group, so the same principles apply as noted above. Three types of plutonium have been identified in soil around Fukushima Daiichi plant. Plutonium does not exist in nature, but is man-made.

What Can Anthroposophic Medicine Offer?

In addition to the lifestyle and supplement information above, two substances have particular importance: peat and Aurum (gold).

Recently, Uriel Pharmacy released an excellent newsletter which explained the value of peat (*solum uliginosum*) for shielding against radiation. *Solum Aesulus* products and *Aurum Lavender Rose* products contain 20% peat. I have often recommended *Aurum Lavender Rose* ointment prior to medical imaging studies, used on the area for a week or so in advance. These products could be protective of the whole body if applied as bath or massage oil, in event of impending radiation. Dr. Hauschka's *Moor Lavender Oil* is another product which contains peat.

Dr. Sigfried Knauer, a respected anthroposophic physician who practiced in southern California, is said to have recommended Aurum (gold) in potentized form to combat the radiation from atomic bomb tests in earlier decades. Aurum is the metal of the sun, whose healthy radiations are our daily companion.

Stan Padilla, jeweler and student of Native American wisdom, confirms the strength of the sun radiation and its benefit as gold remedy in protecting the thymus and body in general. He was in Chernobyl shortly after the disaster there, and was given homeopathic cell salts of gold and diamond as medicine for radiation sickness and arthritis. Aurum is available from True Botanica, Uriel, and Weleda pharmacies in high-quality preparations for topical, oral, and injectable use (A more detailed description of Stan Padilla's information is available from me upon request).

Anthroposophic therapies, such as rhythmic massage, eurythmy, painting therapy and therapeutic speech and music revitalize the etheric (life forces) body and the astral (soul) body. The world picture brought by Rudolf Steiner through the spiritual science of anthroposophy gives access to understanding suffering and world changes, and working on new levels out of our concern for life.

The Basics

California's Office of Emergency Services lists guidelines for emergency preparedness, including storing

two-four weeks of food and water, a one-month supply of essential prescription medications, a solar or crank radio and cell-phone charger, flashlight or candles, matches, lime for handling toileting if plumbing is unavailable, warm clothing and sturdy shoes. Check your state website for recommendations.

The Future

Seeking responsible partners in creating our future is a foundation for our children and the earth. Emerson Ecologics is undertaking supplement testing for radioactivity and is in conversation with other conscious producers of high quality supplements. The Weston A. Price Foundation networks people and teaches skills in fermenting foods, the original method of storage for grain, vegetables and dairy. Additionally, biodynamic farmers are working with biodynamic preparations to enliven the earth and plants, giving resilience and healing to the planet and its inhabitants.

Decisions will be made in many places over time about the future of nuclear power in human culture. The nuclear industry has always been financially subsidized by governments. It has never been profitable, nor could it be, if truly held accountable for the damage it has potential to cause. If left to the free market alone, it would not exist. Do we want it to continue, and if so, how can its prodigious risks truly be understood and contained?

The more we can unseat our accustomed indulgences and the energy they require, the more we can create a real possibility of new options and move toward a more human future. As we have been sacrificed for, so may we learn to sacrifice. Until then, we can remain aware, informed and prepared.

WORKS CITED

Folkers, Cindy. "Conflicting Mandates, Co-Opted Studies: The International Atomic Energy Agency and the World Health Organization". www.nirs.org

National Research Council of the National Academies, Health Risks from Exposure to Low Levels of Ionizing Radiation: BEIR VII Phase 2. The National Academies Press, Washington, DC, 2005.

Peplow, Mark. "Half Life of a Disaster: Chernobyl's Struggle Offers Lessons for Japan". Nature: International Weekly Journal of Science, Volume 471, 31 March 2011.

ADDITIONAL RESOURCES

The Nuclear Information and Resource Service www.nirs.org

Union of Concerned Scientists www.ucsusa.org

Physicians for Social Responsibility www.psr.org

International Atomic Energy Agency www.iaea.org

World Health Organization www.who.int

Vesica Institute www.vesica.org

Thomas Cowan, MD www.fourfoldhealing.com

Maine Seaweed theseaweedman.com

Magnescent Iodine www.magnascent.com

Vital Choice www.vitalchoice.com

Vital Nutrients www.vitalnutrients.net

Ancient Minerals (topical magnesium chloride spray) www.ancient-minerals.com

Uriel Pharmacy www.urielpharmacy.com

True Botanica www.truebotanica.com

Weleda www.weleda.com

Dr. Hauschka www.drhauschka.com

California Department of Emergency Services www.oes.ca.gov

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