

LIMERICK NUCLEAR PLANT ROUTINELY RELEASES RADIATION

**YOUR RADIATION EXPOSURE RISKS
ARE
ADDITIVE, CUMULATIVE, SYNERGISTIC**

**Because You Are Continuously Exposed
Through Many Routes Of Exposure, It Is
Important To Limit All Unnecessary
Exposures To Radiation. This Section
Includes Suggestions For How You Can:**

**REDUCE YOUR
RADIATION
EXPOSURE RISKS**

RADIATION AND YOUR DRINKING WATER

Why Filter Your Drinking Water For Radiation?

LIMERICK NUCLEAR PLANT IS A SERIOUS RADIOACTIVE THREAT TO DRINKING WATER, BOTH FROM PUBLIC WATER SYSTEMS BEYOND LIMEICK'S DISCHARGES INTO THE SCHUYLKILL RIVER OR RESIDENTIAL WELLS IF YOU LIVE AROUND LIMERICK NUCLEAR PLANT. SEE ACE WEBSITE FOR DETAILS ON EACH.

- ✓ **Public Drinking Water:** The Schuylkill River is the source of drinking water for almost 2 million people from Pottstown to Philadelphia. Limerick Nuclear Plant discharges radioactive wastewater into the Schuylkill River, 24 hours a day, 365 days a year. Limerick's radioactive discharges can include a broad range of radionuclides (any of over 100). Because Limerick Nuclear Plant cooling towers significantly deplete the river each year and some radionuclides have long half lives, concentrations from continuous radioactive discharges are of major concern.

**Public Water Systems After Limerick's Radioactive Wastewater Discharges Include:
Phoenixville - Aqua PA - American Water Works - Philadelphia**

Lax Testing: Public water systems usually only test for radiation on a 3 to 9 year cycle. Water treatment systems aren't required to test for all radionuclides which are discharged with Limerick's wastewater. Public water systems are not required to filter out radiation from the drinking water they sell and distribute.

Radiation Was Detected In Philadelphia's Water At Some Of The Highest Levels In The Nation after radiation from Japan made its way across the nation. However, it should have been higher on the West Coast if all the radiation was from Japan. Philadelphia is just 21 miles downstream from Limerick Nuclear Plant's continuous radioactive discharges into the Schuylkill River.

- ✓ **Groundwater and Wells:** Limerick Nuclear Plant contaminated groundwater with a broad range of radionuclides. No independent research exists to prove how far radioactive contamination may have spread or in which directions.

Why Filtration For Radiation, Instead of Testing?

Testing for all the different kinds of radiation that could be in your water from Limerick Nuclear Power Plant can be costly. Testing is only a snapshot in time and can be unreliable, depending on where the equipment is calibrated. Non-Detect does not mean radionuclides are not there, just that levels are under what EPA irresponsibly calls safe. Both The National Academy of Sciences (BEIR VII Report) and Physicians for Social Responsibility (psr.org) say there is "no safe level" of radiation exposure. EPA's so-called "Safe" levels are not safe.

- Several kinds of filtration are needed to attempt to remove radiation from your drinking water. The money you would spend for testing could instead be used toward the best filtration you can afford for precaution and prevention.

How To Filter Radiation From Your Drinking Water?

Research concludes that a combination of technologies may remove most radionuclides that found their way into your tap water. All removal technologies are available in consumer products for home water treatment. The process combines reverse osmosis, activated carbon, and ion exchange.

Reverse Osmosis Filtration

EPA says Reverse Osmosis can remove up to 99% of radionuclides, including uranium, radium, gross alpha, beta particles, and photon emitters. Reverse osmosis works by forcing water through material with very tiny pores-as tiny as .0001 microns. Almost nothing except water emerges on the other side.

Activated Carbon

Many believe this can remove dissolved radioactive gases, such as Iodine-131, that can pass through reverse osmosis membranes. Most reverse osmosis units have an activated pre-carbon and post carbon unit. Activated carbon works by absorbing contaminants and fixing them, as water passes through. NOTE: Carbon needs to be changed frequently.

Ion Exchange

EPA also recommends ion exchange for removing radioactive compounds from drinking water, especially for removing Cesium-137 and Radium 226-228. Ion exchange is the process used in water softeners, It removes contaminants when water passes through resins that contain sodium ions.

Prevention and Precaution Are Important In This Region!

It Is Wise To Purchase The Most Effective Water Filtration Systems

Your Budget Will Allow and Change Filters Often.

Additive, Cumulative, and Synergistic Impacts Of Low-Level Radiation Doses, Over Time, Can Have Harmful Health Effects, Including Cancer, On You And Your Family. It Makes Sense To Prevent Unnecessary Ingestion Of Radiation.

In Summary: Why You Need Water Filtration For Public or Well Water

Public Water - Schuylkill River

- Almost two million people from Pottstown to Philadelphia get their drinking water from the Schuylkill River, yet many polluting industries and others have state NPDES permits to discharge dangerous toxics into the Schuylkill River with no regard to the synergistic, cumulative, and additive harmful impacts to public health, fish, and wildlife.
- Beginning in 1997, ACE started reviewing major pollution permits, identifying serious threats to the Schuylkill River and public drinking water sources in the Pottstown area.
- Of major concern - three sources of radioactive discharges into the river, especially Limerick Nuclear Power Plant. The National Academy of Sciences says there is no safe level of exposure to radiation. Limerick Nuclear Plant is permitted to discharge over 5 Billion Gallons of Radioactive Water into the Schuylkill River every year. Other radioactive discharges are from Pottstown Landfill's radioactive leachate and water from cleaning radioactive uniforms in Royersford.
- Mine water contamination is a growing concern. A DRBC Demonstration Project for Limerick Nuclear Power Plant allowed pumping of billions of gallons of contaminated unfiltered mine water into the Schuylkill River since 2003 (Map) Exelon is trying to add toxic water from even more mines.
- The mine water discharge is allowed to contain Manganese at 80 times higher than Safe Drinking Water Standards and Iron 20 times higher. High sulfates are also permitted.
- A WHO safe drinking water report raised health concerns over Iron, Manganese, Sulfates and other chemicals (2008). There is already cause for concern. Pottstown Water Treatment Plant testing showed increased levels of Iron and Manganese (2008).

Groundwater Contamination and Well Water

- There are many sources of major groundwater contamination in our region. Because we live in a fractured bedrock aquifer it is difficult to accurately determine the extent or direction of that groundwater contamination.
- The contamination can spread underground undetected for decades. Once the groundwater is contaminated, it is never really completely cleaned up.
- ACE investigated EPA and DEP documentation on groundwater contamination from three of those sources. For details contact ACE (610) 326-2387.
- Pottstown Landfill's hazardous leachate contaminated groundwater with alpha and beta radiation since the 1970s., EPA said it could travel over 15 miles and even contaminate public water.
- In 1993, EPA said the Occidental Chemical Superfund Site would take over 100 years of pumping and treating to restore the site to Safe Drinking Water Standards.
- NRC recently provided ACE with information showing that Limerick Nuclear Plant contaminated groundwater with radiation.

Types of Filtration

- Carafe, Faucet-Mount, Countertop, Plumbed-In, Whole House, plus Shower
- Water Filtration Technologies: Particulate, Carbon Adsorption, Softeners/Ion Exchangers, Ultraviolet (UV) Treatment, Reverse Osmosis, Distillation

Limit Other Routes Of Exposure To Radiation.

Living in the region of Limerick Nuclear Power Plant, with Limerick's routine radiation releases into our air and water, makes it even more important to limit (to the degree possible) all routes of exposure to radiation.

While no one knows for sure how many different kinds of radionuclides (potentially over 100) or the varying levels to which we are exposed in each route of exposure, we do know that:

- The National Academy of Sciences BEIR VII Report says there is no safe level of radiation exposure.
- Research shows low levels of radiation exposure over time can be just as harmful as one high level dose - so that even if levels released are low as is claimed by the biased and often deceptive nuclear industry, we are still very much at risk from Limerick Nuclear Plant's routine radiation releases that poison our air, water, soil, vegetation, food, and milk.

The nuclear industry, including Exelon, ignore obvious and documented risks of radiation exposure by making unsubstantiated, deceptive, shameful, meaningless comparisons and false arguments. You've heard their unsubstantiated claims - you get more radiation from bananas, the sun, and flying in an airplane than from nuclear plants.

Such absurd comparisons from NRC and the nuclear industry should be ignored and rejected.

- **First of all, those exposures are additive to your radiation exposures from Limerick Nuclear Power Plant, and should be avoided because of Limerick.**
- **Besides, you can choose to eat a banana, go in the sun, or fly in a plane, but Limerick continuously exposes you to a broad range of radionuclides, from many routes of exposure, without your consent.**

Avoiding full and honest disclosure about the impacts of radiation exposure from nuclear plants is unfortunate because it will never leads to prevention and precaution. See ACE Website Sections On Radiation For More Detailed Information.

**Because You Are Continuously Exposed
To Limerick Nuclear Power Plant's
Routine Radiation Releases,
You Can And Should Limit All
Unnecessary Exposure To Radiation**

YOU CAN PROTECT YOURSELF FROM RADIATION

When You Live Near Limerick Nuclear Plant's Routine Radiation Releases, Radiation Exposure From Other Sources Are No Excuse To Dismiss Risks. In Fact, All Radiation Exposures Are Additive, Cumulative, and Synergistic.

AVOID RADIATION EXPOSURE **WHENEVER AND WHEREEVER POSSIBLE:**

- It Is Precautionary To LIMIT All Forms Of Radiation Exposure:
 - ✓ Limit Unnecessary Radioactive Medical Tests, like Xrays and Cat Scans
 - ✓ Limit Flying
 - ✓ Limit Use Of Microwaves and Cell Phones
- During Rain, Snow, and Other Precipitation Limit Time Outdoors:
 - ✓ Cover Your Head and Body If You Need To Be Outdoors In Precipitation
 - ✓ Leave Shoes and Clothes At The Door When Entering Your Home
- Soak, Wash, Rinse In Filtered Water - (Bentonite Clay and Non-Toxic Veggie Wash Recommended)
 - ✓ Leafy Greens and All Other Vegetables, Even Those Pre-Washed
 - ✓ All Fresh Fruits Which Are Not Peeled
- Limit Radiation In The Water You Use For Drinking, Cooking, and Washing Fruits and Vegetables.
 - ✓ Use a reverse osmosis filter for your kitchen sink (with a pre and post carbon filter). Change the filter often.
- Avoid Recreation On The Schuylkill River, Near And Beyond Limerick's Radioactive Wastewater Discharge Pipe Into The River At Limerick.
- Do Not Fish Or Eat Fish From The Schuylkill River Beyond Pottstown.
- Limit Outdoor Sports and Other Activities - Remember, Soil and Vegetation Becomes Radioactive From Releases Into Air.
- Limit Use of Bottled Water. Bottled Water Is Not Tested For Radiation Or Otherwise Regulated. Since Fukushima, Radiation Could Be Contaminating Many Sources.
- When Possible, Buy Food and Supplements Certified Radiation Free.

**As Long As Limerick Nuclear Plant Operates, More Radiation Will Be Released, Getting Into Your Air, Water, Food, Soil, Vegetation, Milk, And Your Body.
Radiation Exposure Risks Will Increase For You and Your Family.**

Help Close Limerick Nuclear Plant Now!

REDUCE RADIATION EXPOSURE IMPACTS

PROTECT YOURSELF NUTRITIONALLY

Recommendations From Physicians, Nutritionists, And Experts Knowledgeable About Radiation Exposure

Dr. Ann Louise Gittleman - Recommends a comprehensive approach on her blog:

- ✓ Sea Vegetables - Tested for radiation
- ✓ Foods High in Beta-Carotene
- ✓ Potassium
- ✓ Calcium
- ✓ Mineral-Rich Foods
- ✓ Potassium Iodide, if necessary

Certified Nutritional Practitioner - International Institute of Concern for Public Health (www.iicph.org)

To Minimize Risks, Aliss Terpstra Recommends:

- ✓ Increase Antioxidants C and E
- ✓ Probiotics
- ✓ Vitamin K2
- ✓ Minerals - Boron, Potassium, Magnesium
- ✓ Minimize Fluoride - Antagonistic in Combating Free Radical Damage from Radiation Fallout

Herbs and Supplements Which May Support Overall Health In Nuclear Accidents

Recommended by Dr. Mercola

- ✓ High-Dose Vitamin C
- ✓ Kelp and Other Seaweeds - High in Natural Iodine
- ✓ Bentonite Clays
- ✓ Zeolites - To Neutralize Radiation
- ✓ Fulvic Acid
- ✓ Magnesium
- ✓ Selenium
- ✓ Ginseng
- ✓ Coconut Oil - Supports Optimal Thyroid Health
- ✓ Chlorella - Contains Chlorophyll Which Increases Resistance to Radiation

Potassium Iodide - Use to Protect Thyroid Gland - 1 to 3 Days ONLY in a Major Radiation Emergency
NOT For Long-Term Prevention - Could Result In Thyrotoxicosis

American Thyroid Association Recommends:

- ✓ Anyone living within 50 miles of a nuclear plant should have potassium iodide in their house at all times in the event of a radiation emergency.
- ✓ It should be made available to those living within 200 miles of a nuclear plant.

Avoid Calcium Deficiency To Minimize Risk From Strontium-90 Radiation -
Strontium-90 from nuclear reactors mimics calcium.

International Journal of Low Radiation 2008 - Mercola.com

- A Prime Agent In Protection - Vitamin D-3 Against Low Radiation Damage And Radiation-Induced Cancer
- Cholecalciferol - Natural Supplement
- Researchers Found Daily Intake (Adults 4,000 to 8,000 IU) To Maintain Blood Levels of Vitamin D Metabolites to Reduce Risk of Breast and Colon Cancer by 1/2
- Earlier Studies Found Vitamin D Could Help Prevent At Least 16 Types Of Cancer
- Get Vitamin D Blood Levels Checked With TEST 25 (OH)D, also called hydroxyvitamin D

Dr. David Brownstein - Clinical Study - Over 5,000 Patients Tested

- 95% Patients Iodine Deficient
- Comparable to Percent of People Deficient in Vitamin D
- Safe Thyroid Support - Ideal Situation Especially Near Routine Radiation Releases From Nuclear Plants Like Limerick.

Before, During, After Nuclear Accident Take Adequate Amounts Of Iodine From SAFE Sources

- Food
- Natural Iodine Sources - Seagreens, Kelp, Other Sea Vegetables
- Supplements - Natural Iodine and Organic Potassium - All Should Be CERTIFIED Radiation Free

David Brownstein, MD Blog - Thyroid and Hormone Expert

Book: "Iodine: Why You Need It and Why You Can't Live Without It"

"Iodine is an Essential Nutrient to Protect From Radioactive Contamination of the Thyroid and Other Glands."

Dr. Jeff Patterson, Former President of Physicians for Social Responsibility

- *"There Is NO Safe Level Of Radionuclide Exposure, Whether From Food, Water, Or Other Sources. PERIOD!"*
- "Every Effort Must Be Taken To Minimize Radionuclide Content In Food And Water."
- "Exposure to Radionuclides, like Iodine-131 and Cesium-137, INCREASES Risk of Cancer."

Dr. Gary Young

Young Living's QuadShield Kit For Synergistic, Protective Effects On Hormonal And Immune Systems

Super C Powerful Immune Enhancer

Melrose Protective Skin Barrier

Longevity Super Antioxidant

Thyromin Contains Kelp and Iodine

For More Information Contact: Lucey Harley (610) 641-1116

LuceyHarley@aol.com www.luceyharley.com

To Remove Radionuclide Particulates Soak and Rinse Fruits and Vegetables

Detox And Purify With Safe, Strong, Absorptive Bentonite Clay

Examples: Sonne's #7 - Liquid Frontier Natural Products- Powder

Radiation Exposure

**Reduce Risks
With Safe Effective Soak
To Detox
Fruits and Vegetables**

Calcium Bentonite Clay





**One Way To Start To Protect Yourself
Prevention With Young Living's QuadShield Kit**

For Synergistic, Protective Effects On Hormonal And Immune Systems

- | | |
|---------------------|---------------------------------|
| 1. Super C | Powerful Immune Enhancer |
| 2. Melrose | Protective Skin Barrier |
| 3. Longevity | Super Antioxidant |
| 4. Thyromin | Contains Kelp and Iodine |

For More Information Contact: Lucey Harley (610) 641-1116
LuceyHarley@aol.com www.luceyharley.com

Seek Immediate Safe Shelter In A Radiological Emergency

There is no way of knowing how much warning time the public will receive about either an attack by terrorists or a severe accident at Limerick, so being prepared in advance and knowing what to do and when to do it is important.

- The presence of radiation will not be known until trained personnel with specialized equipment are on the scene.
- Whether you are indoors or outdoors, home or at work, be extra cautious.
- It would be safer to assume radiological contamination has occurred—particularly in an urban setting or near other likely terrorist targets—and take the proper precautions.
- As with any radiation, you want to avoid or limit exposure.
- This is particularly true of inhaling radioactive dust that results from the explosion.
- As you seek shelter from any location (indoors or outdoors) and there is radiation in the air, breathe through the cloth of your shirt or coat to limit your exposure. If you manage to avoid breathing radioactive particulates, your proximity to the radioactive particles may still result in some radiation exposure.
- As soon as you hear about a potential radiological release, seek safe shelter immediately. If you are:

Outdoors

Seek shelter indoors immediately in the nearest building.

If appropriate shelter is not available, move as rapidly as is safe upwind and away from the location. Then, seek appropriate shelter as soon as possible.

Listen for official instructions and follow directions if they make sense.

Indoors

If you have time, turn off ventilation and heating systems, close windows, vents, fireplace dampers, exhaust fans, and clothes dryer vents. Retrieve your disaster supplies kit and a battery-powered radio and take them to your shelter room.

Seek shelter immediately, preferably underground or in an interior room of a building, placing as much distance and dense shielding as possible between you and the outdoors where the radioactive material may be.

Seal windows and external doors that do not fit snugly with duct tape to reduce infiltration of radioactive particles. Plastic sheeting will not provide shielding from radioactivity nor from blast effects of a nearby explosion.

Listen for official instructions and follow directions.

After finding safe shelter, those who may have been exposed to radioactive material should decontaminate themselves. To do this, remove and bag your clothing (and isolate the bag away from you and others), and shower thoroughly with soap and water. Seek medical attention after officials indicate it is safe to leave shelter.

Contamination from radiological emergency could affect a wide area, depending on the amount cause, the quantity and type of radioactive material released, and meteorological conditions. Radiation dissipation rates vary, but radiation from a terrorist attack or serious accident will likely take longer to dissipate due to a potentially larger localized concentration of radioactive material.

RADIATION SICKNESS

SYMPTOMS

Early Symptoms

Within 1 to 24 Hours

- **Nausea and Vomiting**
- **Diarrhea**
- **Headache**
- **Fever**

Later Symptoms

Within 1 to 4 Weeks

- **Dizziness and Disorientation**
- **Weakness and Fatigue**
- **Hair Loss**
- **Bloody Vomit and Stools**
- **Infections**
- **Poor Wound Healing**
- **Low Blood Pressure**

