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## H-Bomb Fall-Out Not So Scary -- Man Always in Radioactivity

### Despite Frightening Aspects, Much Protection Available Against Atom Dust Stirred Up by Bomb

(Editor's Note: One of the most fearful terms of the atomic age is fall-out — the rain of radioactive particles that follows the explosion of atomic or nuclear weapons. It is also one of the least understood terms of the age. The following story may relieve your nightmares today and save your life tomorrow)

By ALTON L. BLAKESLEE  
Associated Press Science Reporter  
CHICAGO (AP) — Fall-out seems to be the bogeyman scare word of our times.

But stop and look at it. Look with the focus of facts, say a number of scientists, and many of its panicky aspects vanish or look different.

Fall-out really isn't mysterious or hard to understand. Why then is it frightening?

It's frightening to some people because they believe there is no protection against it. This is not true.

It's frightening to some because they think an H-bomb could lay an all-inclusive carpet of radioactive death over 7,000 square miles, an area almost the size of New Jersey, or of Connecticut and Rhode Island combined. Again, untrue.

It's frightening to others who see fall-out as a genetic time bomb, playing hob with heredity and dooming thousands of unborn children to death or illnesses. Experts disagree on how much risk there is of this.

**Sea of Radioactivity**  
Fall-out scares some who regard radioactivity as a brand new, terrifying thing. Actually, we have always lived in a sea of natural radioactivity.

Every second, 5,400 radioactive potassium atoms explode in your body, giving off x-rays. So, every second do 2,160 radioactive carbon atoms. That's for a person weighing 130 pounds. A heavier person is even more radioactive. You're also bombarded from within and without by rays from radium and uranium, and by cosmic rays.

You and your ancestors and children are all naturally radioactive. Fall-out had nothing to do with it. The new thing is that fall-out is adding to this radioactivity. The critical question is: How much? Dangerous amounts now? Or later? Or if it war should come?

**Seeds of Panic**  
Fall-out is sometimes blamed for causing floods, tornadoes, frosts and drought, for skin rashes, for making people feel giddy, for pitting windshields. These ideas are nonsense. They are even dangerous seeds of costly panic, some scientists warn.

"People may be highly vulnerable to a mere threat of atomic warfare because of the sense of mystery about radiation," declared Dr. Austin Brues, director of the Division of Biological and Medical Research at Argonne National Laboratory.

"The danger of panic could far exceed that of atomic war alone. There is a very thin line separating false security from unreasoning fear, and one gets the impression that people dash back and forth across this frontier like jittery ostriches. Only knowledge can broaden this line to a place where people can stand."

**Knowledge Is Defense**  
Knowledge about fall-out is your defense.

Begin with a bomb test . . . A tremendous blast and heat, and a colorful cloud soaring high in the air. If the bomb bursts near the ground, the cloud contains what will become fall-out — dust sucked up by the explosion and made radioactive. Some of these particles "live" only a short time, giving off their rays and turning into something harmless. Others can live for many years.

Coarse, heavier particles quickly settle out, falling in a highly dangerous rain over a nearby area. For a small bomb, this area may be up to 20 miles downwind. For an H-bomb, up to 100 or 200 miles.

Lighter stuff can float for miles, even go around the world before it slowly settles, or is brought down by rain or snow. Most of this far-drifting stuff is made up of tiny balls of glass. It is vaporized sand or — in war — perhaps vaporized buildings.

Disclosure that one H-bomb could dust 7,000 square miles with dangerous fall-out hit some people with terrifying impact. The Atomic Energy Commission (AEC) said this fall-out could threaten survival of humans within that area.

But many people overlooked exactly what the AEC said. It said fall-out would threaten humans over that area under the worst possible circumstances and if they took no protection. It also said this fall-out would be patchy, not evenly distributed.

**Easy Protection**  
Protection is easily possible.

The basement of your home could give protection; so could concrete buildings. Even a fox-hole with a wooden cover would cut exposure to damaging radiation. The cloud would soon pass; the rain of dust would stop.

"Get out or get under" advises Dr. James Arnold, University of Chicago physicist. He declares a

good civilian defense system is essential to give people instructions, to take charge.

If a bomb hit Washington, you'd have an hour's warning before the radioactive cloud passed over the Baltimore area, says Dr. J.B.H.

Kuper, of Brookhaven National Laboratory of the AEC at Upton, Long Island.

If you should be caught outside and dusted, you should remove your clothing, take a bath with soap and water. Some corn meal

### Kids, Hot Coffee Don't Mix



This is what can—and did—happen when a hot coffee pot and kids get tangled up. Mickey Parker, 1595 Berry St., (top photo) is demonstrating the danger of an accessible coffee pot, while Jackie Peschel, 1245 Mill St., is shown being comforted by a nurse at Salem Memorial Hospital where he was confined for burns received when he tipped a hot coffee pot over on himself. The coffee pot is just one of the dangerous items found in the average home being pointed out this week by the Marion County Health Department and the Salem Junior Chamber of Commerce in observance of National Child Safety Week. (Statesman Photos)



### Dangers for Children Lurk in U. S. Kitchens

The average kitchen contains 150 square feet of potential death—especially for children.

Dr. Willard Stone, Marion County Health officer, Tuesday used this illustration to show that the kitchen is the most dangerous room in the house for children.

The health department in conjunction with the Salem Junior Chamber of Commerce is this week sponsoring local observance of National Child Safety Week. Purpose is to point out accident-prone areas around the home.

**5 Died Accidentally**  
In Marion County last year five children died accidentally in home and near-home areas. In Oregon more children died last year in home tragedies than in automobile accidents.

The Child Safety committee is headed by Robert Coates for the Jaycees and Wade Patterson for the health department.

It has distributed some 6,000 pamphlets and posters, depicting safety practices, to local schools, youth groups and to Salem merchants for distribution to patrons of toy departments and other juvenile areas.

The committee also has arranged for a series of safety talks at local organization meetings. Press and radio publicity releases also are included as well as a film avail-

able for free showing at adult groups and schools.

Safety talks this week will include these at the Exchange Club today at noon; South Salem Chamber of Commerce tonight, and at the Optimists Club meeting Thursday night.

Dr. Stone said Tuesday that more than 600 children die annually in America from home poisoning accident, and 36 per cent of these deaths are attributable to common household items, such as bleaches, polishes, and other liquids. Children under 5 are more prone to poisoning accidents.

Other accidents which have taken lives include those from sharp instruments, hot scalding liquids and unguarded appliances.

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added to water would help scrub off particles sticking to the skin. Afterward, you could hose down your home. But check where the contaminated water collected. You'd have to avoid contaminated food or water — canned food and water would be helpful.

**Civilian Defense**  
The severe fall-out area probably would have to be evacuated — a task for civilian defense. A battery-powered radio could be your source of instructions. Inexpensive devices can be marketed to warn you of dangerous areas of fall-out.

Water from wells would be safe to drink, but reservoirs might be contaminated. There are methods to make reservoir water safe fairly quickly.

The point is simple — intelligent action and knowledge can save your life.

How about the fall-out threat from Nevada bomb tests? From all bombs tested so far, we've been exposed to as much radiation, on the average, as that in one chest x-ray, the AEC says.

Merrill Eisenbud of the AEC Health and Safety Laboratory in New York, directs the compiling of daily reports of fall-out and natural radioactivity from 89 stations over the country.

The amount from fall-out so far? Just a fraction of the normal radioactivity always present, nowhere near enough to cause burns or sickness, he says.

**Foods Radioactive**  
All foods are and have been radioactive. In one quart of milk, 3,000 potassium atoms disintegrate every minute.

Radium, uranium and thorium are scattered through the earth, enough so 100,000 of these atoms disintegrate each minute in every square foot of the earth's soil. Plants take up some of this radioactivity, and it enters your body. You breathe radon gas — from radium.

Radioactive potassium was formed when the earth was born. Radioactive carbon is continually being made high in the air as atoms of air are bombarded by cosmic rays. The carbon drifts down, enters plants, animals and humans. So does some tritium, the triple-weight hydrogen used in H-bombs.

Does this natural radioactivity do us harm? No one knows for sure. All the radioactive atoms within you are only a billionth of a fraction of one per cent of all the atoms in your body. But rays from some of these atoms might hit and change the machinery of body cells to cause some cancers, according to one theory.

**Fraction of Normal**  
Eisenbud estimates that all the fall-out from all bomb tests since 1946 was enough to add 10,000 disintegrations per minute to each square foot of soil, in this country. This would be only a fraction of normal or background radioactivity. The average amount of radiation per square mile from fall-out would have to be multiplied by a million to cause detectable injury, according to Dr. John C. Bugher, director of the AEC's Division of Biology and Medicine.

Sharp argument comes over whether fall-out is producing bad genetic or hereditary effects. Here you can pick your own experts: Dr. A.H. Sturtevant, California Institute of Technology: Fall-out is subjecting us to enough additional radiation to produce 70 American children a year with changed genes. Worldwide, at least 1,800 children born each year with changed genes. Most changes or mutations are harmful, can produce humans constitutionally weakened, more subject to infections and diseases.

Dr. Ralph Singleton, Brookhaven geneticist: There probably is a safe level of radiation, below which no genetic changes occur. Extensive experiments with corn have shown that it takes a sizeable amount of radiation to produce mutations. Cattle severely burned by the Alamogordo, N.M., bomb in 1945 have not shown any genetic mutations. There has been no significant signs of genetic effects yet among 50,000 babies born to survivors of the Hiroshima and Nagasaki bombs. I'm more alarmed about the 35,000 automobile deaths a year than over genetic death. I think some geneticists are unduly alarmed. We need to prevent war, and if bomb tests will help do that, any small risks are justified.

**Change Unknowns**  
Dr. Kuper, Brookhaven: There is very poor data on the incidence of human mutations. If the rate

of spontaneous change is not known, how can we know what is a significant increase?

Dr. H.J. Muller, Indiana University geneticist: "It is a common fallacy that mutations produce grave visible abnormalities. Circus freaks and monsters, though often cited as examples, are rare. For each change obvious in the first or second generation, hundreds are too small or obscure to be seen. Yet genes with unimportant individual effect have important combined action."

The National Academy of Sciences recently took note of the divergent views among scientists and laymen on the nature and degree of human dangers resulting from the use of atomic energy.

**Financial Backing**  
The academy announced it will undertake a "broad appraisal of present knowledge about the effects of atomic radiation on living organisms." The study will receive the cooperation of the Atomic Energy Commission and financial backing from the Rockefeller Foundation.

Earlier, the Federation of American Scientists had called on the United Nations to establish a commission to explore and evaluate possible dangers from continued bomb tests.

Fall-out from an atomic war could be quite a different matter from fall-out spread by bomb tests.

Could it destroy humanity? Not likely, most experts hold, for the radioactivity probably wouldn't be spread over all inhabited areas.

Asked that question, Dr. J. Robert Oppenheimer, famed A-bomb scientist, said: "Not quite. You can

### Herd Inspection Action Delayed

Marion County Court has delayed action on a request by Mrs. F. L. Zielinski that a substitute herd inspector be appointed to inspect her herd.

The court, in replying to the request, said that under a court order of 1950 those requesting a substitute herd inspector must submit a written application setting forth exact reasons for the request.

Dr. John Hanrahan is the regular inspector.

### Stayton Soldier On Transport

SEATTLE (UP)—The transport Gen. W. A. Mann arrived here Wednesday from the Far East with four Oregon residents among the servicemen on board.

They are Pfc. Norman G. Williams, Canyon City; A3-c Thomas W. Godwin, Gold Beach; Cpl. Rodney A. Wilman, Lakeview; and Cpl. Douglas C. Barrow, Stayton.

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### Italians Give Adlai Trouble

ROME (UP)—An unrecognized Adlai Stevenson had a minor run-in with police Wednesday before he was admitted to Premier Mario Scelba's official residence for lunch.

Police guarding the residence held up Stevenson's taxi, in which the 1952 Democratic presidential candidate had arrived alone, until he was able to establish his identity.

Stevenson said Scelba invited him to lunch when the Premier heard he was passing through Rome on his way to a "business trip" in Africa. The Democratic leader arrived by plane from New York Tuesday night.

### Fashion Designer Has Cut Wrist

MIAMI BEACH, Fla. (UP)—A 22-year-old New York fashion designer and wife of dancer Nick Condos, former husband of comedienne Martha Raye, was in critical condition here Wednesday with a slashed wrist.

Dr. Ralph Robbins said Barbara Caplin Condos had a cut on her left wrist which had bled profusely. The doctor said the young woman also was in a comatose condition caused by "eight or 12" sleeping pills.

Condos told detectives his wife, whom he married last November in Aiken, S.C., had been ill and despondent.

### See at the Home & Garden Show

#### the MIGHTY MUSTANG

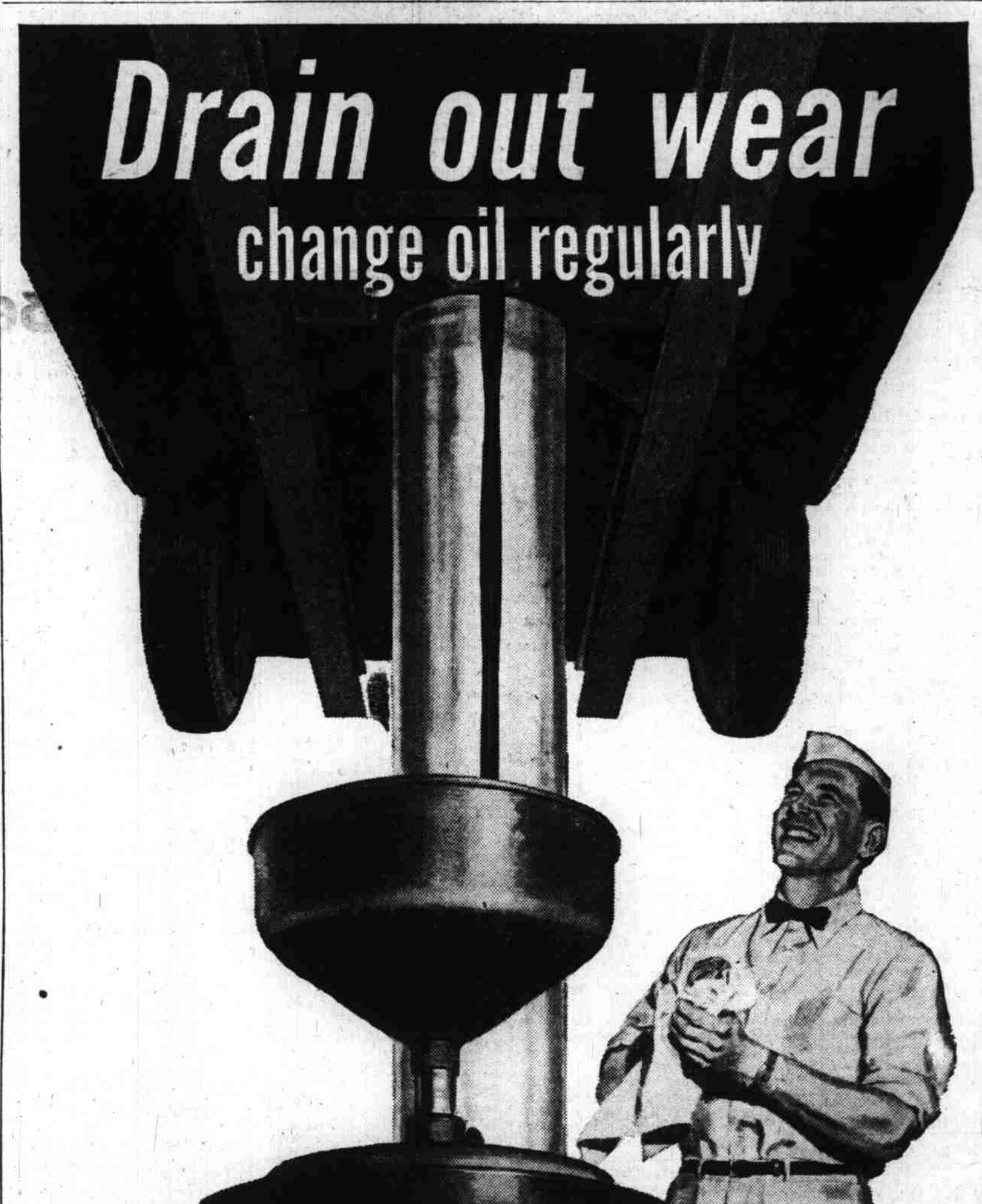
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