

Living with the Bomb ^[1]

After the United States detonated the first atomic bombs in 1945, most Americans were simply happy that the war had ended. But as more was learned about the power and effects of atomic bombs, worry spread. When the Soviet Union tested its first atomic bomb in 1949, worry turned to fear and panic.

Duck and cover

To ease Americans' fears, the U.S. Government produced films explaining the true nature of atomic bombs and demonstrating techniques for surviving an atomic attack. The film *Duck and Cover*, was shown to schoolchildren beginning in 1950. The cartoon turtle, the cheerful theme song, and the practical advice were supposed to reassure children who might worry about an atomic attack. Instead, the images of little Johnny diving off his bicycle convinced children that the bombs could fall at any moment and gave them nightmares.

The phrase "duck and cover" later became a joke. In fact, the survival strategies demonstrated in this film are good ones -- especially if the attack you're trying to survive uses an atomic bomb on the scale that existed at the time. The long-term effects of radiation were worse than anyone knew at the time -- cancer can appear decades after exposure to massive radiation. But a relatively short distance from ground zero, you could protect yourself from blast winds, and flying debris simply by getting down on the ground as quickly as possible. (It's also good advice if a tornado hits.) And covering your face and neck with almost anything could help prevent flash burns.

Surviving atomic attack

The government's assumption at the time was that atomic weapons might be used as part of a "conventional" war between the U.S. and the Soviet Union. In that case, the U.S. would need to keep up war production just as it did during World War II. Although major cities would surely be targets, evacuating cities would be disastrous. Americans were urged to prepare for possible atomic attack and to know where to go and what to do if the air raid sirens ever sounded. This [Office of Civil Defense Film](#) ^[2], also produced in 1950, gave detailed instructions.

The hydrogen bomb

Then, in 1952, the United States tested the first hydrogen bomb, or "H-bomb." The first atomic bombs were *fission* bombs: They unleashed the energy created by splitting atoms of uranium. (Fission is also the process used in nuclear reactors to produce energy for home and commercial use.) The hydrogen bomb uses *fusion*: A fusion bomb is used to compress atoms of hydrogen so tightly together that they fuse into heavier helium. Fusion releases far more energy than fission; it's the most powerful force in nature, the force that powers stars.

The first hydrogen bomb, cheerily code-named "Mike," was detonated on an island in the South Pacific in November 1952. Its "yield" was about 10 megatons -- equivalent to 10 million tons of TNT, 50 times the power of the bomb used on Hiroshima. The shock wave was measured in Southern California. Watch [U.S. Army film of the first hydrogen bomb test, November 1952](#) ^[3]

The Soviet Union tested its own hydrogen bomb a few years later, and soon the two nations were racing to build more and bigger bombs. The Soviet "Tsar Bomba," yielded 50 megatons and was capable of 100.

This size of bomb could annihilate a major city, and the focus of U.S. Civil Defense turned to evacuation. The old "duck and cover" films began to seem laughable as it became clear that an all-out nuclear war could destroy civilization.

Bomb shelters

Many Americans, fearful of nuclear war, still looked for ways to prepare for survival. Civil defense pamphlets gave instructions on stocking basements with water, canned goods, and flashlights. In the suburbs, some families built backyard bomb shelters -- underground bunkers in which they could take shelter from a blast and wait out the worst effects of radiation.

[Their sheltered honeymoon](#) ^[4] (*Life* magazine, August 10, 1959) - The stunt might have been called "fallout can be fun." At the behest of a Miami bomb shelter builder, Mr. and Mrs. Melvin Mininson this month subjected their budding marriage to the strain of 14 days (the critical period of fallout danger) of unbroken togetherness in a 22-ton, steel and concrete 8x14 foot shelter 12 feet underground.

Fading fears

By the early 1960s, fears of nuclear war began to fade. The Cuban Missile Crisis brought the world so close to nuclear war that afterward, the U.S. and Soviet Union agreed to take steps toward disarmament. In 1963, the two nations agreed to a ban on above-ground testing of nuclear weapons. Ironically, the threat of annihilation -- what would come to be known as "mutually assured destruction" -- made both sides reluctant ever to use nuclear weapons. In the United States, other issues took center stage. In 1959, 64 percent of Americans saw nuclear war as the the nation's most urgent problem, but by 1964, that number had dropped to 16 percent.

Still, fears of a nuclear World War III persisted until the Cold War ended in the 1980s. And we still live with the threat of atomic weapons today, as more nations try to develop them and as the U.S. works to keep them out of the hands of terrorists. After the 9/11 terrorist attacks, interest in civil defense rose again -- now as a means of protection from small-scale "dirty bombs" and biological weapons. The Cold War may be a thing of the past, but the need for civil defense is not.

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Watch and Listen:

Civil defense for schools: duck and cover

Civil defense for schools: duck and cover



Watch *Duck and Cover*, an information tutorial designed to help manage a crisis in the event of hydrogen and atomic bombings.

Primary Sources:

Aerial Photograph of Missiles in Cuba (1962)^[15]

from the National Archives

Test Ban Treaty (1963) ^[16]

from the National Archives

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