

## WEAPONS (ATOMIC AND THERMONUCLEAR)

A gruesome invention, atomic and thermonuclear weapons involve the human manipulation of the atom. An inversion of genesis, with these weapons man turns matter back into energy.

An atomic bomb is a fission device. A thermonuclear bomb--also called a hydrogen bomb-- is a fusion weapon. The yield of the latter is potentially unlimited.

A single thermonuclear weapon can have an explosive yield greater than the total of all explosives ever used in war since gunpowder was invented. And one study suggested that a twenty-megaton weapon could spread heat over five thousand square miles, or an area the size of Connecticut.

In effect, it is now possible to annihilate a small country with a single bomb.

Nikita Khrushchev, the late Soviet leader, predicted that nuclear weapons would make ground forces archaic, expensive, and unnecessary. For him, a nuclear device was “the weapon of the future.”

## WEAPONS (ATOMIC AND NUCLEAR), CONSTRUCTION OF

If fissile material (highly enriched uranium or plutonium) is available, constructing a bomb is elementary. Indeed, it is theoretically possible to produce a nuclear explosion by dropping two pieces of plutonium on to each other from a suitable height.

The Hiroshima bomb of 1945 was a simple and reliable gun-type weapon. It used an anti-aircraft gun barrel that was 6.5 inches wide, 6 feet long, and weighed 1,000 pounds. A smokeless powder, called cordite (used in conventional artillery), fired a fifty-six -pound highly enriched uranium bullet into a target composed of eight-five pounds of highly enriched uranium.

In 1977, a Princeton undergraduate named John Phillips showed in his senior thesis that he could design a nuclear weapon with publicly available material. He designed a ten-kiloton weapon, an implosion bomb that would use plutonium available from the nuclear power industry. The size of a beach ball, its cost would be 2,000 dollars in 1977 moneys.

To fashion a bomb of mass destruction, one needs only 2.2 pounds of plutonium or 5.5 pounds of enriched uranium.

Although John Phillips' senior thesis was disturbing, he was eclipsed in 1995 by David Hahn, an adolescent boy from Clinton Township, Michigan.

Using radium (from old junkyard radium clocks), americium-241 (a radioactive isotope found in smoke detectors), beryllium, aluminum, and some other ingredients, Hahn formed a makeshift reactor core. He held it together with duct tape!

On June 26, 1995 Hahn--then aged seventeen years--contacted authorities. His makeshift core was really heating up and was producing large amounts of radiation.

A dangerous boy, Hahn had made his first nitroglycerin by the age of fourteen.

## WEAPONS (ATOMIC AND NUCLEAR), DEFENSE AGAINST

Atomic and thermonuclear bombs can produce four lethal effects: the blast, the heat, the radiation, and the radioactive fallout.

In addition, the weapon can produce an "electro-magnetic pulse" which will disable cars, cellular telephones, computers, and so forth.

If caught out in the open, take cover behind a hill or lie in a ditch, with your head away from the blast. Cover all exposed skin (if possible, place a wet towel

over your nose and mouth), and do not look at the detonation.

Remember, that during tests soldiers in trenches 2,500 yards from ground zero survived.

Tragically, if a person happens to be looking in the direction of a nuclear flash, there is no time to blink. The blast burns away the retina, and the victim will be blinded forever. Over thousands of square miles, pilots will be blinded.

The prudent survivalist will wear an eye patch. If a blast occurs--and he is caught by surprise--at least he will not be totally blind. (In the early days of the cold war, American B-47 bomber pilots were instructed to wear an eye patch in case of a nuclear attack.)

Stay down until the blast wave passes. Remember, after the detonation, it could take thirty seconds or more for the blast wave to arrive.

If you are close enough to see the blast, fallout will arrive in about twenty minutes. Eighty per cent of the fallout will arrive in the first twenty-four hours.

If possible, leave the area. Discard your clothes and shower.

If you cannot leave the area--and no fallout shelter is available--place as much distance as possible between you and the radioactive dust. In a building, go to the corner of the basement. In a large building, take refuge in the center of the middle floors, equidistant from the dust on the roof and the dust on the ground.

## WEAPONS (ATOMIC AND NUCLEAR), FALLOUT SHELTERS AND

Fallout refers to the dangerous radioactive particles dispersed over a wide area after a nuclear explosion.

A fallout shelter--a structure which is part foxhole and part bunker--is essential in a thermonuclear age.

In Switzerland, the law requires the structures in private homes. In Marxist Albania, the dictator Enver Hoxha built 700,000 concrete bunkers, or one for every four people.

In the Union of Soviet Socialist Republics, under Ramenki, a suburb of Moscow, the U.S.S.R. built the most elaborate shelter ever constructed. It could protect thirty thousand members of the elite for several months. Completed in the 1970's--and maintained by the secret police--the refuge had an underground railroad to transport people into the shelter.

Elsewhere in the world, individuals will have to build their own shelters. This includes people in the United States.

With a fallout shelter, the three principles are shielding, distance, and time.

Regarding shielding, bricks, concrete, books, or earth may be used, and the more used the better. At least two feet of concrete or three feet of earth will stop gamma rays (the most lethal form of radiation).

Regarding distance, the farther you are from the fallout, the better. In a house, use the corner of a basement. In a high rise structure, the center of a middle floor is best, halfway between the fallout on the roof and the fallout on the ground.

Regarding time, fallout is most dangerous within the first two weeks. After 48 hours, radioactive fallout diminishes to one one-hundredth of its original strength. After two weeks, radioactive fallout diminishes to one ten-thousandth of its original level.

If someone is close enough to see an atomic or nuclear blast, the radioactive fallout will start arriving in twenty minutes. In other words, he has twenty

minutes to reach a shelter.

The amount of fallout that eventually arrives will depend on the location of the blast. An air burst--a detonation at eight hundred to sixteen hundred feet--will produce almost no radioactive fallout.

A ground-burst, however, will produce a great deal. The wind will carry the fallout in an elliptical pattern about two hundred miles long and fifty miles wide.

An underwater blast of an atomic or nuclear weapon is especially "dirty." The detonation will produce a massive plume of water followed by a radioactive mist. (In a 1946 test, an underwater nuclear blast destroyed only a few test ships, but the radioactivity contaminated more than a hundred. Despite vigorous washing, the ships could not be decontaminated.)

## WEAPONS (ATOMIC AND NUCLEAR), FALLOUT SHELTERS AND SUPPLIES

To be effective, a fallout shelter needs to be stocked with water, food, and weapons.

The shelter needs at *least* a two-week supply of water. At a *minimum* level, an adult requires two and one-half quarts of water per day.

For food, the shelter should contain four airtight plastic containers filled with wheat, sugar (honey), powdered milk, and salt respectively. A year's supply of these items can be purchased for one-half ounce of gold.

Properly stored, the powdered milk will last a long time, the wheat has almost unlimited shelf life, and the sugar and salt will last forever.

The shelter should also include canned foods (such as meats, vegetables, soups, and fruits), a supply of multi-vitamins, and (as a last resort) bags of dried dog

food. (Dry dog food is cheap, it does not spoil, and a hundred-pound sack contains as many calories as a ton of potatoes.)

For defense, the shelter should contain a shotgun and a small .22-caliber handgun. Note that five hundred rounds of .22 ammunition weighs 3.5 pounds and fits inside a pocket. Five hundred rounds of .357-magnum ammunition, in contrast, weighs thirty-five pounds and requires a briefcase.

Why are weapons required? Remember, as one survivalist noted, “The homeless, the starving, the nuclear sick, and the mobs of survivors will be roaming the countryside, looking for two things, food and loot, and someone to blame.”

## WEAPONS (ATOMIC AND THERMONUCLEAR), RADIATION SICKNESS AND

Radiation sickness--caused by receiving a high dose of radioactivity in a short time--is a stealth weapon. Radiation cannot be seen, smelled, felt, or tasted by humans, but exposure may cause sickness and death.

If a person receives a *lethal* dose of radiation, there is no known cure and no way to reverse its course. Children--because of their small size and rapid metabolism-- are more at risk than adults.

The symptoms of radiation sickness (in order of frequency) are nausea, vomiting, diarrhea, loss of appetite, malaise, loss of hair, a tendency to bleed, and susceptibility to infections.

If the victim remains symptom-free for more than twenty-four hours he probably received a low dose and will require little or no immediate medical attention.

At Hiroshima in 1945, Japanese doctors observed radiation sickness directly. They noticed that some people who seemed uninjured died days later.

Symptoms resembled an overdose of X-rays.

The physicians also noticed that those who remained quiet after the bomb detonated were less likely to become sick than those who were active. They also observed that radiation sickness was not communicable.

## WEAPONS (ATOMIC AND NUCLEAR), STATE AND

According to Martin van Creveld, the invention of nuclear weapons will ultimately undermine the state.

With nuclear weapons, two orthodox states cannot survive at war, and a “community which cannot safeguard the lives of members . . . is unlikely either to command their loyalty or survive for long.”

Indeed, according to Martin Van Creveld, “Nuclear weapons work against geographical distinctions of any kind.” If armed units and the political units that field them are to survive and fight, they will have to become intermingled with each other and the civilian population. Once intermingled, battles will be replaced by skirmishes, bombings, and massacres. Military bases will be replaced by hideouts and caches. Geographical sovereignty will be replaced by a kind of population control achieved by a mixture of propaganda and terror.