

# NUCLEAR TERRORISM

A weapon of mass destruction (WMD) is a weapon which can kill large numbers of humans, animals, and plants.

- WMDs are rarely used because of the fear surrounding “Mutually Assured Destruction,” which is when war has been escalated to such a high degree that it affects much of the world and its inhabitants.

Fear that WMDs could fall into the wrong hands-Nuclear Terrorism

Iranian President Ahmadinejad has insisted that his country’s nuclear ambitions are purely for domestic purposes not defense.

It’s impossible to know how many secret terrorists exist inside Pakistan’s military intelligence agencies and what access they might have to Pakistan’s roughly 50 nuclear weapons

As noted in the first slide, the Soviet Union produced just over 5,000 nuclear weapons during the Cold War arms race with the United States

Building and Detonated a Bomb

25 kg of highly enriched uranium or 8 kg of plutonium are needed for a bomb

Uranium occurs naturally, but not in a form that is usable for nuclear weapons. To convert natural uranium into a form that can be used in nuclear weapons, it must be "enriched" to increase the concentration of uranium-235 to uranium-238.

Enriching uranium is difficult and costly; the process requires separating isotopes that have very similar chemical and physical properties.

The enrichment process is the main obstacle to producing uranium that can be used in nuclear weapons.

Plutonium occurs only in small amounts in nature. However, essentially all isotopic mixtures of plutonium—including reactor-grade plutonium—can be used for nuclear weapons.

In order to use plutonium in nuclear weapons it has to be separated from the rest of the spent fuel in a reprocessing facility.

Plutonium separation is easier than uranium enrichment because it involves separating different elements instead of different isotopes of the same element.

## Interesting Facts

An average nuclear power plant contains 1,000 times as much long-lived radioactivity than was released by the Hiroshima bomb

Radioactive Material is Everywhere! Medicine, Research, Plants, Mines and even smoke alarms

In 2006 the FBI spent \$1129 Million Dollars in Counterterrorism

In 2004 the FBI reported 4,499 supposed terrorist threats

At the end of 2004 there were 79 pending terrorist cases

There are more than 100 research reactors or related facilities worldwide with enough highly enriched uranium to potentially build a bomb. Some of this material is secured by nothing more than an underpaid guard and a chain link fence.

The first round of U.S.-funded security upgrades has been completed for only about 50 percent of the nuclear material in Russia. The remaining material, over 300 tons, is enough for more than 15,000 nuclear weapons.

Russia currently has 16,000 warheads of which 5,830 are active. The United States has 9,938 total warheads of which 5,163 are active.

Dirty Bombs or Radiological Dispersion Device (RDD) are *not* nuclear weapons but very easy to make:

A conventional explosive, such as TNT, is packaged with a radioactive material, generally in the form of powder or pellets.

## We Can Protect Ourselves from Dirty Bombs!

The Center for Disease Control tells us to:

1. Cover nose and mouth with a cloth to prevent breathing radioactive dust/smoke
2. Don't touch objects thrown by the explosion
3. Go in a building structurally intact
4. Remove outer layer of clothing and seal in a plastic bag
5. Wash with soap and water, make sure to wash hair
6. Tune into local news for more information