What happens after a nuclear annihilation or detonation?

Introduction

A nuclear fallout is the radioactive dust and debris scattered in the atmosphere and falls back on Earth caused by nuclear fission or fusion. After the nuclear bomb detonation, it takes seconds for the shockwave, heat and flying objects to cross the fireball's radius. It depends on the place that you are in to survive.

There has been an instruction manual called "Plan of Action" for anyone outside of the fireball radius to survive. There are three things to remember: get inside, stay inside and stay tuned.

After the nuclear fallout, there will be nuclear winter.

Main Body (2–3 paragraphs)

(a) Immediate Danger and Shelter

Once the detonation occurs, it offers 15 minutes for anyone beyond the fireball radius to seek shelter. Fallout decays 50% of its energy in the first half an hour, 80% in the first day and 99% after two weeks. The most suitable shelter will be in the middle of high-rise buildings and even underground.

(b) Surviving the fallout period

There are three things you can protect yourself from fallout: time, distance, and shielding. The more time and distance you spend away from the radiation source, the safer you are away from nuclear decay. Shielding provides protection from radioactive particles like Uranium, Neptunium, Plutonium Isotopes and others.

If you are in your car or in a building during the fallout period, close all vents and windows to prevent radioactive particles from entering and prevent from poisoning the air inside.

(c) Long-Term Survival and Recovery

Remove any clothing if any particle of fallout lands on the cloths. After that, take a shower, showering with soap can remove any radioactive particles, but don't use conditioner, it will combine fallout particles with your hair.

(d) History of Nuclear weapons

Fortunately, there has only been two uses of Nuclear weapons. Those cases are in 1945 during WWII, the "Little Boy" bomb and "Fat Man" bomb.
The "Little Boy" bomb was dropped in Hiroshima and had a force of 12 to 15,000 tons of TNT, which wiped out 13KM[{2}].

The "Fat Man" bomb was dropped in Nagasaki and had a force of 21,000 tons of TNT, wiped out 1 mile and leveled 6.7 square kilometers.

killed 90,000 to 166,000 people in Hiroshima and 60,000 to 80,000 people in Nagasaki

But other than these two cases, there are other bombings like Tsar bomb, has 50,000,000 tons of TNT. Now Russia has been developing "Poseidon" which has 100,000,000 tons of TNT.

Conclusion

Once after the detonation of the nuclear bomb, 15 minutes later the Fallout begins. But the moment after the detonation, the smoke will create its own micro-climate. The smoke creates a cloud called " Colossal

Pyrocumulonimbus ”, it will stay there for years, the smoke will rise as high as 50KM above the bomb site. The smoke lets the updraft wind to carry it downstream, causes Fallout. Although nuclear weapon has only been used twice, we should take precaution.

References

- 🌐 **Radioactive Fallout after Nuclear Explosions and Accidents**
- 🌐 **What Happens AFTER Nuclear War?**
- 🌐 **Can you survive nuclear fallout? - Brooke Buddemeier and Jessica S. ...**
- 🌐 **This Is How You Actually Survive a Nuclear Attack**
- 🌐 **How To Survive The First Hour Of A Nuclear Blast / Fallout!**