

Danger — Nuclear War

As physicians, scientists, and concerned citizens, alarmed by an international climate that increasingly presents nuclear war as a "rational" possibility, we are impelled to renew a warning, based on medical and scientific analyses, that:

- 1. Nuclear war, even a "limited" one, would result in death, injury, and disease on a scale that has no precedent in the history of human existence.*
- 2. Medical "disaster planning" for nuclear war is meaningless. There is no possible effective medical response. Most hospitals would be destroyed, most medical personnel dead or injured, most supplies unavailable. Most "survivors" would die.*
- 3. There is no effective civil defense. The blast, thermal and radiation effects would kill even those in shelters, and the fallout would reach those who had been evacuated.*
- 4. Recovery from nuclear war would be impossible. The economic, ecologic, and social fabric on which human life depends would be destroyed in the U.S., the U.S.S.R., and much of the rest of the world.*
- 5. In sum, there can be no winners in a nuclear war. Worldwide fallout would contaminate much of the globe for generations and atmospheric effects would severely damage all living things.*

Therefore, in the interests of protecting human

life, we appeal to you to:

- 1. Defuse the current tensions between our countries.*
- 2. Ban the use of all nuclear weapons.*
- 3. Recognize the threat posed by the very existence of our enormous nuclear arsenals, and begin dismantling them.*

We urge you to meet with us to discuss the medical consequences of nuclear war.

We urge all physicians in the U.S. and the U.S.S.R. to join us in this appeal.

This letter derives from our understanding of the destructive potential of nuclear explosions that would result should a nuclear war occur. To share with you our perspective on this possibility, we ask you to consider the following:

- The bomb dropped on Hiroshima had the explosive force of approximately 15,000 tons (15 kilotons) of TNT. Today, the U.S. has over 30,000 nuclear bombs and Russia has 20,000. Nuclear weapons in present day arsenals range in size from one kiloton to 20 megatons (20 million tons of TNT). All the bombs dropped during the eight and a half years the U.S. fought in Vietnam were equivalent to four million tons of TNT (4 megatons).
- A 20 megaton thermonuclear bomb exploded on a clear day at ground level on a large East coast city would create a fire-ball nearly six miles in diameter, with temperatures of twenty to thirty million degrees

Fahrenheit. Everything in the downtown area, the streets and earth below, and all living things, would be vaporized, leaving a crater several hundred feet deep.

- At six miles from the epicenter, all people would be instantly killed by a huge silent heat flash travelling at the speed of light. Glass would melt and buildings would collapse when hit by a supersonic shock wave and winds of 225 miles per hour.
- Within a ten mile radius, or roughly the distance to Route 128 from Boston, to Newark from New York City, or to the Maryland Beltway from Washington, D.C., the blast wave, 100 mile per hour winds, and fires would inflict almost total casualties with at least 50% dead and 40% injured. Even at 20 miles from the epicenter, 50% of the people would be killed or injured by the direct thermal radiation and blast pressures. A single nuclear device would result in tens of thousands of severe burn injuries. The entire U.S. has intensive care facilities for fewer than 2000 such cases.
- Many would be killed by random spontaneous fires fueled by oil storage tanks, natural gas lines, gasoline and LNG tanks. These fires might coalesce into an enormous firestorm 1200 square miles in area, fanned by 100 - 200 mile per hour winds, creating temperatures capable of cooking and asphyxiating those in shelters.