Preventing Nuclear War: There’s no cure

Pacific Life Community Retreat
Pilgrim Firs
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David C Hall MD
Physicians for Social Responsibility
and Mack Johnson
Ground Zero Center for Nonviolent Action

“There is no cure, only prevention of nuclear war.”
It is a wonderful thing to work to integrate lunch counters, public accommodations, and schools. But it would be rather absurd to work to get schools and lunch counters integrated and not be concerned with the survival of a world in which to integrate.

2/6/68 CALC

“What will be the ultimate value of having established social justice in a context where all people, Negro and White, are merely free to face destruction by strontium 90 or atomic war?”

-1959 WRL
President Obama’s guidance (2013):

• affirms that the United States will maintain a credible [nuclear] deterrent, capable of convincing any potential adversary that the adverse consequences of attacking the United States or our allies and partners far outweigh any potential benefit they may seek to gain through an attack.
Senator Feinstein (D-CA) called attention to this report, saying “There’s no such thing as ‘limited’ nuclear war.”

A blue-ribbon Pentagon panel has urged the Trump administration to make the U.S. arsenal more capable of “limited” atomic war. The Defense Science Board … urges the president to consider altering existing and planned U.S. armaments to achieve a greater number of lower-yield weapons that could provide a “tailored nuclear option for limited use.” …

Fully one-third of the nuclear arsenal is already considered low-yield, defense analysts say, and almost all the newest warheads are being built with less destructive options. But experts on the Pentagon panel and elsewhere say the board’s goal is to further increase the number of smaller-scale nuclear weapons — and the ways they can be delivered — in order to deter adversaries, primarily Russia, from using nuclear weapons first.

Hans Kristensen, Matthew McKinzie, Theodore Postol

US Modernization of Ballistic Missile Warheads
Triples their lethality

*Super fuze = first strike*

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US nuclear forces modernization program ... has implemented revolutionary new technologies that will vastly increase the targeting capability of the US ballistic missile arsenal. This increase in capability is astonishing—boosting the overall killing power of existing US ballistic missile forces by a factor of roughly three—and it creates exactly what one would expect to see, if a nuclear-armed state were planning to have the capacity to fight and win a nuclear war by disarming enemies with a surprise first strike.

FIGURE 1. The deployment of the new MC4700 arming, fuzing, and firing system on the W76-1/Mk4A significantly increases the number of hard target kill-capable warheads on US ballistic missile submarines. The result of this fuzing scheme is a significant increase in the probability that a warhead will explode close enough to destroy the target even though the accuracy of the missile-warhead system has itself not improved.
DETONATION SPREAD: CONVENTIONAL BALLISTIC MISSILE FUZE

VOLUME IN WHICH DETONATION OF MK4 100 KT TRIDENT WARHEAD PRODUCES BLAST OVERTHEPRESSURES OF 10,000 PSI OR MORE ON THE GROUND

DISTANCE IN METERS

GROUND CIRCULAR ERROR PROBABLE

SS-18 MISSILE SILO

MISS HIT MISS
The ultimate effect of the super fuze's flexible burst-height capability is a significantly increased target kill probability of the new W76-1/Mk4A warhead compared with the conventional warhead of the same type.
TRIDENT II W88 455 KT WARHEAD
AGAINST A DEEPLY BURIED UNDERGROUND COMMAND POST

UNDERGROUND COMMAND CENTER
THE SIZE OF THE CAPITOL BUILDING

DISTANCE IN METERS
Kristensen, McKinzie, and Postol:

... submarines now patrol with more than three times the number of warheads needed to destroy the entire fleet of Russian land-based missiles in their silos.
Nuclear Weapons - What’s at stake

“Deterrence is a dialogue of the blind with the deaf.”

“At best it is a gamble no mortal should pretend to make. At worst it invokes death on a scale rivalling the power of the creator.”

General George Lee Butler
Strategic Air Commander then Strategic Commander 1991-1994

“Death by Deterrence” 2002
Rep. Adam Smith’s position on nuclear weapons: March 1, 2017
- ranking Democrat on the House Armed Services Committee

Reducing the dangers from nuclear weapons must remain one of our highest national security priorities…. I do believe that we need to maintain some nuclear weapons to have a deterrent capability, but retaining the current level of over 4,000 nuclear weapons defies common sense…. as a starting point, we can at least cut the number of our nuclear weapons in half….

Submarines represent the most survivable nuclear delivery system and will carry 70 percent of the nuclear weapons under New START Treaty. It is critical that they remain in continuous service….

I strongly favor the President consider adopting a no-first-use policy to reduce the risk of miscalculation and unintended nuclear war…. However, I am concerned that Mr. Lieu’s legislation [Congress must approve first use] over-reaches constitutionally.
Rep. Mac Thornberry, Republican chair of the House Armed Services Committee (from his website):

It is a mistake for the United States to say beforehand what it will or will not do—to take options off the table when it comes to defending our country. Our nuclear deterrent has helped discourage chemical and biological attacks. I am afraid that the President’s new nuclear policy may embolden aggressors and make us more vulnerable. We should not give terrorists and potential adversaries less to worry about.

http://thornberry.house.gov/legislation/nuclearpolicy.htm
WHAT FOLLOWS IS A 4-SLIDE SUMMARY OF THE
PHYSICAL EFFECTS CREATED BY DROPPING ONE 800
KILOTON HYDROGEN BOMB ON A CITY - IN THIS
CASE NEW YORK CITY.

800KT WAS CHOSEN BECAUSE IT APPROXIMATES A
TYPICAL HYDROGEN BOMB IN THE RUSSIAN
NUCLEAR ARSENAL. TWO AMERICAN W-88
WARHEADS WOULD YIELD 900KT.
One Second After the Detonation of an 800 kt Nuclear Weapon

Surface Temperature of Fireball ~ 16,000° K
Surface Temperature of Sun ~ 6,000° K

Intended Detonation Altitude for "Urban Industrial Target"

Smoke Cloud from Thermally Disintegrating Stone and Metal Surfaces, Combusting Materials, Evaporating Road Surfaces, and the like

Fireball Radiates More Than 50 Times More Light and Heat Relative to the Same Area on the Sun’s Surface

"Ground Zero"

Horizontal Delivery Accuracy of US Trident II Warheads
~30 to 40 Seconds After the Detonation of an 800 kt Nuclear Weapon

Surface Temperature of Fireball ~ 16,000° K
Surface Temperature of Sun ~ 6,000° K

Intended Detonation Altitude for “Urban Industrial Target”

Target Debris Lifted Into the Air by the Outgoing Primary and Reflected Shock Wave

“Ground Zero”

Horizontal Delivery Accuracy of US Trident II Warheads

image by Dr. Theodore Postol
~Two Minutes After the Detonation of an 800 kt Nuclear Weapon

250 to 300 mph Vertical Afterwinds

2 Minutes After Detonation
250 to 300 mph Inward Moving Afterwinds from the Sucking Effects of the Giant Superheated Rising Fireball

Image by Dr. Theodore Postol
Nuclear Firestorm

Created by a single 800 kiloton nuclear warhead detonated above New York City

No survivors in the fire zone

Firestorm certain to occur in central red zone, total area 90 square miles or 230 square kilometers

Firestorm likely to occur in entire red zone, total area 152 square miles or 389 square kilometers

Calculated for a clear day with average weather conditions

Professor Postol narrates these slides
https://youtu.be/CVud0p4aGRo 13:30 to 36:00
The closest we have come to a nuclear war was caused by nuclear weapons

Robert McNamara, President Kennedy’s Secretary of Defense during 1962 Cuban Missile Crisis,’ writes in 2002:

These events seemed dangerous at the time. But it wasn’t until nearly thirty years afterward that we learned, from General Gribkov’s testimony at a January 1992 conference here in this room in Havana, that the nuclear warheads for both tactical and strategic nuclear weapons had already reached Cuba before the quarantine line was established—162 nuclear warheads in all. [emphasis added]

Each of the 14 current Trident warships can carry 5400 Hiroshima equivalent hydrogen bombs. Each of the 12 planned Columbia-class replacement warships is designed to carry 4800 Hiroshima equivalent hydrogen bombs with enhanced lethality super fuzes.

Frank Kendall, the undersecretary for acquisition, signed the decision memo that officially moves [building 12 SSBNx] forward late Wednesday, January 4, 2017.

100 Hiroshimas look like the next 2 slides

Climatic Consequences of Nuclear Conflict
The Dangers of Nuclear Weapons Today
One Hiroshima bomb
GLOBAL WARMING: The long history of ice ages and warming

The paleoclimate record combined with global models shows past ice ages as well as periods even warmer than today.

As the Earth moved out of ice ages over the past million years, the global temperature rose a total of 4 to 7 degrees Celsius over about 5,000 years. In the past century alone, the temperature has climbed 0.7 degrees Celsius, roughly ten times faster than the average rate of ice-age-recovery warming.

When global warming has happened at various times in the past two million years, it has taken the planet about 5,000 years to warm 5 degrees. The predicted rate of warming for the next century is at least 20 times faster.

http://earthobservatory.nasa.gov/Features/GlobalWarming/page3.php
A nuclear war between Russia and the United States, even after the arsenal reductions planned under New START, could produce a nuclear winter. Hence, an attack by either side could be suicidal, resulting in self-assured destruction.

Check this out:  http://www.nucleardarkness.org/index2.php
Watch the sequence of smoke and soot choking the planet after only a quarter of the world’s strategic arsenals is loosed on cities

This pictures the end of civilization

Medical/Environmental Consequences of use
"The threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law ...”

“There exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control."
United Nations member states have voted overwhelmingly to start negotiations on a treaty to ban nuclear weapons in March and August 2017, despite strong opposition from nuclear-armed nations and their allies.

In the vote in the UN disarmament and international security committee on Thursday, 123 nations were in favour of the resolution, 38 opposed and 16 abstained.

Nuclear powers the United States, Russia, Israel, France and the United Kingdom were among those that opposed the measure.
Ways to learn more and to get involved

PSR's Nukebusters Short Film Contest Winner by Jonathan Deaton

Watch this film and test yourself.

“Join the Conversation”
How much do you know about nuclear weapons?

Click here to get started

WPSR is organizing groups to help educate our federal decision-makers (WPSR.org)
Watch for a rerun on PBS
Documentary of nuclear weapon accidents — there have been hundreds!
Nuclear Weapons - Seattle
Join our campaign! 159 nations favor banning nuclear weapons based on their humanitarian impact. If you agree,
Click here to contact PSR/Washington

Environment and Health
PSR's Climate Health Action Teams teach you about the health benefits of clean, healthy energy sources and prepare you to advocate in your state for renewable energy and energy efficiency. Please join us to help move your state to a clean energy future and a livable climate.

Safe Energy
The Safe Energy program focuses on protecting public health, taxpayer dollars, and national security by preventing the construction of expensive, dirty, and dangerous new nuclear reactors.

US affiliate of

psr.org
Founded in 1977, Ground Zero Center for Nonviolent Action offers the opportunity to explore the meaning and practice of nonviolence from a perspective of deep spiritual reflection, providing a means for witnessing to and resisting all nuclear weapons, especially Trident. We seek to go to the root of violence and injustice in our world and experience the transforming power of love through nonviolent direct action.

“Zero violence”
The year the Berlin Wall came down