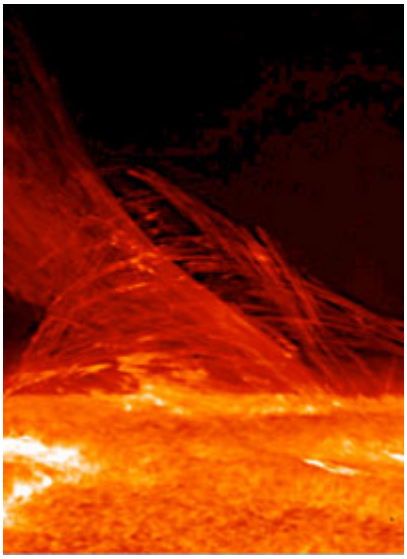
Written by **William F. Jasper** on December 23, 2008

Heat or Cold: Which Is More Deadly?



But the public is being told otherwise by global-warming alarmists, who in recent years have tried to ramp up the fright factor of their message with claims that an increase in global temperatures will also result in a dramatic increase in heat-related deaths. This motive may have provided the impetus for recent reporting on the climate "death map."

"Heat is more likely to kill an American than an earthquake, and thunderstorms kill more than hurricanes do, according to a 'death map' published on Tuesday." So reports Reuters in a December 17 story on researchers who compiled the county-by-county look at what natural disasters kill Americans. The Reuters story continues:

> Heat and drought caused 19.6 percent of total deaths from natural hazards, with summer thunderstorms causing 18.8 percent and winter weather causing 18.1 percent, the team at the University of South Carolina found.
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> Earthquakes, wildfires and hurricanes combined were responsible for fewer than 5 percent of all hazard deaths.
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> Writing in BioMed Central's International Journal of Health Geographics, they said they hoped to dispel some myths about what the biggest threats to life and limb are.
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> "According to our results, the answer is heat," Susan Cutter and Kevin Borden of the University of South Carolina wrote in their report, which gathered data from 1970 to 2004.

But the conclusions of Cutter and Borden conflict with overwhelming evidence that cold weather is a much bigger killer than hot weather (excluding the tropics, of course).

In an article entitled, "The impact of global warming on health and mortality," published in the *Southern Medical Journal* in 2004, W.R. Keatinge and G.C. Donaldson of Queen Mary's School of Medicine and Dentistry at the University of London note: "Cold-related deaths are far more numerous than heat-related deaths in the United States, Europe, and almost all countries outside the tropics, and almost all of them are due to common illnesses that are increased by cold."

CO2 Science summarizes the *Southern Medical Journal* study:

> Keatinge and Donaldson report that coronary and cerebral thrombosis account for about half of all cold-related deaths, and that respiratory diseases account for approximately half the rest. With respect to the first of these sets of problems, they say that cold stress causes an increase in arterial thrombosis "because the blood becomes more concentrated, and so more liable to clot during exposure to cold." The sequence of events, as they describe it, is that "the body's first

> adjustment to cold stress is to shut down blood flow to the skin to conserve body heat," which "produces an excess of blood in central parts of the body," and that to correct for this effect, "salt and water are moved out from the blood into tissue spaces," leaving behind "increased levels of red cells, white cells, platelets and fibrinogen" that lead to increased viscosity of the blood and a greater risk of clotting.

Keatinge and Donaldson report that "even in climates as warm as southern Europe or North Carolina [USA], cold weather causes more deaths than hot weather." They also note that "rising temperatures could reduce overall mortality rates."

Another important study by two UK health bodies, the Department of Health (DoH) and the Health Protection Agency (HPA) released this year provides additional evidence that cold weather is by far the greater threat to health and life. However, the media spin on the DOH/HPA report, *Health Effects of Climate Change in the UK 2008,* presented headlines that completely contradicted the findings of the report. "Climate change soon could kill thousands in UK," declared the *Guardian*.

British writer Rob Lyons summarized important data from the DOH/HPA report:

> Actual experience over nearly 40 years suggests good news overall. For example, "mean annual heat-related mortality did not rise as summers warmed from 1971 to 2003." That means we're able to adapt to warmer temperatures. Indeed, the authors note: "Heat-related mortalities are substantial throughout Europe, but the hot summers in southern Europe cause little more mortality than the milder summers of more northerly regions." If we're prepared for warm weather and we take simple precautions, then heat shouldn't be a problem.
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> So, for different UK regions, the authors estimate the following decline for hot weather-related fatalities (cases per million of population, 1971-2003):
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> • South-east England from 258 to 193 in 2003;
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> • Rest of England and Wales from 188 to 93;
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> • Scotland from 125 (in 1974) to only eight in 2003.
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> Meanwhile, deaths due to cold weather fell dramatically — overall, by more than 33 per cent. Far more people are affected by cold snaps than by heatwaves, so the change is more significant than for hot-weather deaths. Here is how cold-weather deaths fell between 1971 and 2003:
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> • South-east England from 9,174 to 5,903;
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> • Rest of England and Wales from 9,222 to 6,088;
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> • Scotland from 9,751 in 1974 to 6,166 in 2003.

As Rob Lyons notes, the declining mortality rates and the concomitant temperature increases should be cause for rejoicing, not hand-wringing:

> We should be shouting this from the rooftops: far fewer people are dying because of the temperature than in the past. Milder winters are far more important than hotter summers in achieving this, along with other changes to how people live….
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> If warm weather is that bad, why does it seem to be the dream of every retiring person in Britain to move to the south coast or, better still, Spain or Australia? Unsurprisingly, in a temperate country accustomed to miserable weather, with cold winters and often poor-quality housing,

> higher temperatures are almost certain to have a net benefit for the UK. Yet this doesn't fit in with the general atmosphere of climate change alarmism that encloses newspapers like the *Guardian*. Even the BBC, which is hardly shy about climate alarmism, gave the story a more balanced headline: "Global warming 'may cut deaths.'"

An October 2007 article by S. Fred Singer and Dennis T. Avery, "Health Fears About Global Warming Are Unfounded," assembles an impressive array of research confirming the "cold is deadlier" thesis. Dr. Singer, a noted author, geophysicist, professor of environmental sciences, and former director of the U.S. Weather Satellite Service, and Avery, an agricultural economist and environmental researcher, contend that that the Earth's moderate warming is not anthropogenic (man-made) and has been and will continue to be a net benefit to human health. Singer and Avery write:

> There are certainly deaths and illnesses due to heat waves. These typically include heat stroke, heart attacks, and asthma attacks. Deaths and hospitalizations from heat waves make headlines whenever the temperature hits very high levels.
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> Yet we see the same sort of headlines during cold waves. The elderly die in inadequately heated homes. People get skull fractures from falls on the ice. Men die of heart attacks while shoveling snow. People get colds, flu, pneumonia, and other respiratory diseases. Infectious diseases proliferate. Hospital admissions rise.

"Global warming alarmists present the fairly simplistic theory that higher temperatures will drive more extreme weather events, and these events will raise human death rates," say Singer and Avery. "But overall, cold weather is more effective at killing people than heat waves."

Global warming, they point out, would raise maximum summer temperatures modestly while it would raise winter minimum temperatures significantly. Both factors should help reduce human death rates.

"From 1979 to 1997, extreme cold killed roughly twice as many Americans as heat waves, according to Indur Goklany of the U.S. Department of the Interior," Singer and Avery write. "Cold spells, in other words, are *twice as dangerous* to our health as hot weather." (Emphasis added.)

They continue:

> Heat is becoming a less important factor in human health as air conditioning spreads. Heat-related mortality in 28 major U.S. cities from 1964 through 1998 dropped from 41 deaths per day in the 1960s to only 10.5 per day in the 1990s.
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> A large cohort study comparing households with and without air conditioning in the early 1980s found a 41 percent lower death rate for the air-conditioned households during hot months….
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> In Germany, heat waves were found to reduce overall mortality rates slightly, while cold spells led to a significant increase in deaths.
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> The German authors say the longer a cold spell lasts, the more pronounced the excess mortality — and the higher death rates seem to persist for weeks.
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> Hot spells, in contrast, cause a short surge in deaths followed by a period of lower death rates that persists for more than two weeks.