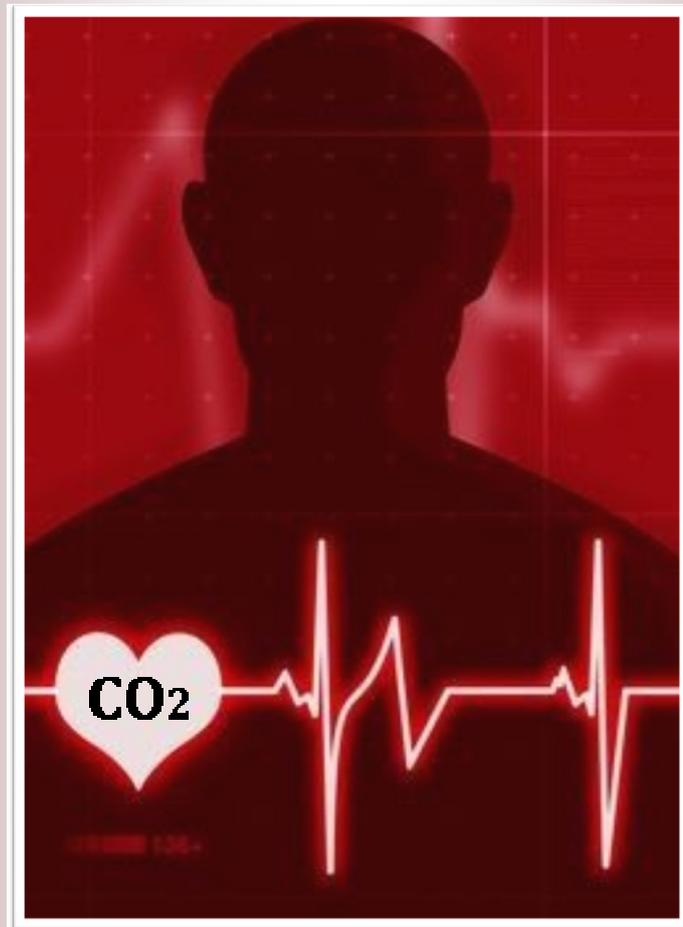


GREENHOUSE GASES HELP US LIVE LONGER *(CO₂ Prevents Heart Attacks)*

by H. Maccabee, PhD, MD



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GREENHOUSE GASES HELP US LIVE LONGER (CO₂ Prevents Heart Attacks)

by H. Maccabee, PhD, MD | August 23, 2010

Amid the clamor about the threat of global warming from increasing carbon dioxide in the atmosphere, there are several scientific voices with surprising contrary ideas. The evidence is now coming together that there are substantial health benefits from greenhouse gases and these benefits are great enough to reconsider the campaign to cut carbon emissions.

The new medical findings were triggered by claims of the IPCC (Intergovernmental Panel on Climate Change) that increased temperatures would cause increases in deaths from heat waves, and that public health needs are therefore a powerful argument for decreasing use of fossil fuels. In the US, the EPA (Environmental Protection Administration) has a mandate to regulate any “pollutant” that harms health, under the Clean Air Act. The EPA therefore

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proposes to regulate CO₂, and climate alarmists are hoping for EPA action, since “cap and trade” legislation failed in the US Senate.

Both the EPA and the IPCC evaluated the incidence of deaths from epidemiologic studies of mortality from heat waves, but basically ignored the effects of possible warming during winter months. For the past 15 years, however, evidence from the US, Europe and around the world is consistent with a decreased death rate of about 2% for every °Centigrade of warming. This effect dwarfs the minor temporary effect of heat waves. The rate of cold mortality from winter months is six to nine times greater than heat

deaths, and therefore the overall benefit from each degree of warming is expected to be six to nine times the harm from heat waves.

The mechanism of the benefit of warming is ascribed to decreased viscosity (thinning) of the blood, decreases in blood pressure, and cardiac workload. There is also decreased inflammation, red cell counts, plasma cholesterol and fibrinogen, all of which reduce the chance of clotting in the blood vessels. This reduces the chance of myocardial infarction (heart attacks) due to coronary artery blockage, as well as the chance of strokes due to blockage of brain vessels, and pneumonia, with better circulation to the lungs.

Recent publications have accurately quantified this effect for myocardial infarctions, showed that older adults are more vulnerable to cold in this way, and that aspirin reduces vulnerability because it reduces clotting. In the British population, for example, there is no increase of myocardial infarction at higher temperatures in the summer.

Two publications in the past year have quantified this, showing that the rate of heart attacks varies with the “diurnal temperature range” i.e., the less cooling at night, the fewer infarctions.

The result of this is a significant prevention of mortality and morbidity (i.e. death and illness). For example, two °C of warming would be expected to postpone more than 100,000 deaths per year in the US. For comparison, this is the total of deaths annually from breast cancer, prostate cancer and auto accidents combined.

The rate of heat deaths has been dropping in the US, largely due to air conditioning, which is especially prevalent in the warmer (Southern) states.

The benefit of greenhouse gases may be even greater than the effect of increasing average temperatures. The mechanism of “greenhouse warming” is that gases such as CO₂ and H₂O block and absorb the outgoing radiant energy from the earth to space at night, resulting in warmer nighttime temperatures. There is very little greenhouse warming in the day, because the incoming solar radiation is much more energetic (shorter wave length) and is not stopped by greenhouse gases, except for the cooling effect of water vapor in clouds. Thus there is moderation of the cooling at night which seems to trigger the vascular events.

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The nature and extent of these benefits are a major reason to reconsider the attempt to decrease carbon dioxide emission. The mandate of the Clean Air Act is to improve human health. The EPA should not regulate greenhouse gases.

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