

**Global Health Risks of Undisclosed Climate Manipulation
Using Aerosolized Coal Combustion Fly Ash**

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Perspective submitted to: **Bulletin of the World Health Organization**

Submitted Sept. 5, 2017; Rejected without Peer-review Sept.6, 2017;

Appealed Sept. 11, 2017 Rejected without Peer-review Nov.15, 2017

Warfare has always been a threat to public health. Now it is evident not simply as reports from bombs and gunfire, but as jet-laid trails across the sky that spread out into cirrus-like clouds before eventually becoming a white haze (Fig. 1). During the Viet Nam War, the U.S. military seeded clouds with silver iodide to trigger rainfall to impede movement of troops and materiel along the Ho Chi Minh trail. Subsequently, the military developed the technology to hinder rainfall by spraying particulate pollution particles into the atmosphere where clouds form thus preventing raindrops from coalescing to become massive enough to fall as rain. The perceived battlefield advantages of rain-prevention are obvious; less obvious, though, is that the technique can be applied to deliberately damage a sovereign nation's agricultural economy, cause crop failure, hardship, starvation, and livestock loss without putting a single person on the ground [1]. Moreover, persistent weather manipulation can upset nature's delicate balance, giving added advantage to aggressive pathogens, such as extreme-tolerant fungi. But rain can only be inhibited for a time. Eventually, the moisture-laden clouds let go with storms and torrential downpours which can cause additional health concerns [2].

There is documented evidence that the U.S. military wants to "own the weather by 2025," so it is not surprising that the aerial spraying by about 2013 had ramped up to a near-daily, near-global activity, undertaken in conjunction with other nations' militaries, without public consent, but with concerted public denial and disinformation [3]. Scientists, presumably fearful of losing grant monies, turned a blind eye to the aerosol particulate spraying. One of us (JMH) published three peer-reviewed public health articles in the scientific literature that evoked aggressive response from a professional disinformation team; two of the public health journals' editors and officials were

pressured to retract those papers without the author being allowed to see and respond to their false assertions [4]. No one has the right to poison the air we all breathe and to deceive the public of the health risks; such actions are an affront to the fundamental principles of the World Health Organization.

For deliberately emplaced aerial pollution particulates, the particles must be micron and submicron in size to remain suspended for some practical length of time. Even without knowing the specific composition of aerosol particulates, one can draw inferences on public health risks from epidemiological studies of air pollution. As we noted [2], pollution particles in that size range ($PM_{2.5}$) are associated with: Alzheimer's disease, lung cancer, risk for stroke, risk for cardiovascular disease, lung inflammation and diabetes, reduced renal function in older males, morbidity and premature mortality, decreased male fertility, low birth weight, onset of asthma, and increased hospital admissions.

By application of forensic techniques, we have been able to show that the main particulate substance being used for the covert jet-emplaced climate manipulation is consistent with coal fly ash (CFA) [1,2,5,6]. CFA is an extremely toxic form of deliberate air pollution. When coal is burned industrially to produce electricity, the heavy ash settles and the light ash, CFA, condenses and forms in the hot flue gases as particles, often as spheres, in the diameter range 0.01-50 μm . This globally-available, major waste-product thus requires little processing for use in aerial climate alteration. In Western nations CFA is routinely trapped and sequestered as it consists of a concentration of the various toxic and radioactive elements present in the coal.

When CFA is inhaled, the tiny particles settle deep in terminal airways and alveoli where they remain trapped for extended periods of time causing harm by antagonistic interactions and toxin releases. There the CFA particles pose significant risk for lung cancer by alpha-particle-emitting radioactive elements, uranium, thorium and their daughter products, and by carcinogens, such as arsenic, cadmium, and hexavalent chromium. CFA contains ultrafine and nano-size particulates that are toxic to lung cells by causing oxidative stress, genotoxicity, and cytotoxicity [7]. Magnetite constituents of CFA have been shown to induce oxidative stress, deplete antioxidant levels, and affect the apoptotic pathway in lung epithelial cells [8].

The nano-size portion of CFA particles can enter the body trans-dermally, penetrate cells, and disrupt their normal functions. Consequently, they can cause tissue inflammation and alter cellular redox balance, potentially causing abnormal cell function or demise [9].

Many of the elements of CFA can be extracted to some degree by water or body moisture. One of these is aluminum, which is of concern for neurological diseases. Chemically mobile aluminum, such as leached from CFA, is toxic to most biota including plants, invertebrates, fish and wildlife [10]. Another leachable CFA element, arsenic, is a carcinogen that can cross the placenta.

The pathogenesis of neurodegenerative diseases includes both iron and aluminum, common components of CFA. In Alzheimer's dementia and Parkinson's disease, iron accumulates in the brain, an indication of iron homeostasis loss and consequential iron-induced oxidative stress [11]. The discovery of spherical, exogenous magnetite (Fe_3O_4) nanoparticles in brain tissue of persons with dementia supports the

connection between air pollution, iron compounds, and neurodegeneration [12]; magnetite in CFA occurs in spherical shapes. Thus we may infer that CFA, as utilized in atmospheric climate manipulation, poses similar or more severe potential risks for neurological diseases.

CFA formed under disequilibrium circumstances alien to Earth's natural environment. When sprayed into the air we breathe over extended periods of time, CFA poses multi-dimensional risks, some of which might not be manifest for years to come. In the short time frame, those most at risk are the young and old and those with chronic illness and compromised immunity. Physicians and healthcare workers will have to deal with increased suffering and disease burden. It is critical to first recognize and then address the adverse health effects of covert CFA aerial spraying to stem the tide of an undisclosed, but rapidly expanding, global public health emergency.

References

1. Herndon, J.M. Adverse agricultural consequences of weather modification. *AGRIVITA Journal of agricultural science* **2016**, 38, 213-221.
2. Herndon, J.M.; Whiteside, M. Further evidence of coal fly ash utilization in tropospheric geoengineering: Implications on human and environmental health. *J. Geog. Environ. Earth Sci. Intrn.* **2017**, 9, 1-8.
3. Fleming, J.R. *Fixing the sky: The checkered history of weather and climate control*. Columbia University Press: New York, 2010.
4. <http://www.nuclearplanet.com/explainretractions.pdf> Accessed September 5, 2017.

5. Herndon, J.M. Aluminum poisoning of humanity and earth's biota by clandestine geoengineering activity: Implications for india. *Curr. Sci.* **2015**, *108*, 2173-2177.
6. Herndon, J.M. Obtaining evidence of coal fly ash content in weather modification (geoengineering) through analyses of post-aerosol spraying rainwater and solid substances. *Ind. J. Sci. Res. and Tech.* **2016**, *4*, 30-36.
7. Gilmour, M.I.; O'Connor, S.; Dick, C.A.J.; Miller, C.A.; Linak, W.P. Differential pulmonary inflammation and in vitro cytotoxicity of size-fractionated fly ash particles from pulverized coal combustion. *Air & Water Manage. Assoc.* **2004**, *54*, 286-295.
8. Ramesh, V.; Ravichandran, P.; Copeland, C.L.; Gopikrishnan, R.; Biradar, S.; Goornavar, V.; Ramesh, G.T.; Hall, J.C. Magnetite induces oxidative stress and apoptosis in lung epithelial cells. *Mol. Cell. Biochem.* **2012**, *363*, 225-234.
9. Buzea, C.; Pacheco, I.; Robbie, K. Nanomaterials and nanoparticles: Sources and toxicity. *Biointerphases 2 MR* **2007**, *17*.
10. Sparling, D.W.; Lowe, T.P. Environmental hazards of aluminum to plants, invertibrates, fish, and wildlife. *Rev. Environ. Contam. Toxicol.* **1996**, *145*, 1-127.
11. Castellani, R.J.; Moreira, P.I.; Liu, G.; Dobson, J.; Perry, G.; Smith, M.A.; Zhu, X. Iron: The redox-active center of oxidative stress in Alzheimer's disease. *Neurochemical research* **2007**, *32*, 1640-1645.
12. Maher, B.A.; Ahmed, I.A.M.; Karloukovski, V.; MacLauren, D.A.; Foulds, P.G.; et al. Magnetite pollution nanoparticles in the human brain. *Proc. Nat. Acad. Sci.* **2016**, *113*, 10797-10801.

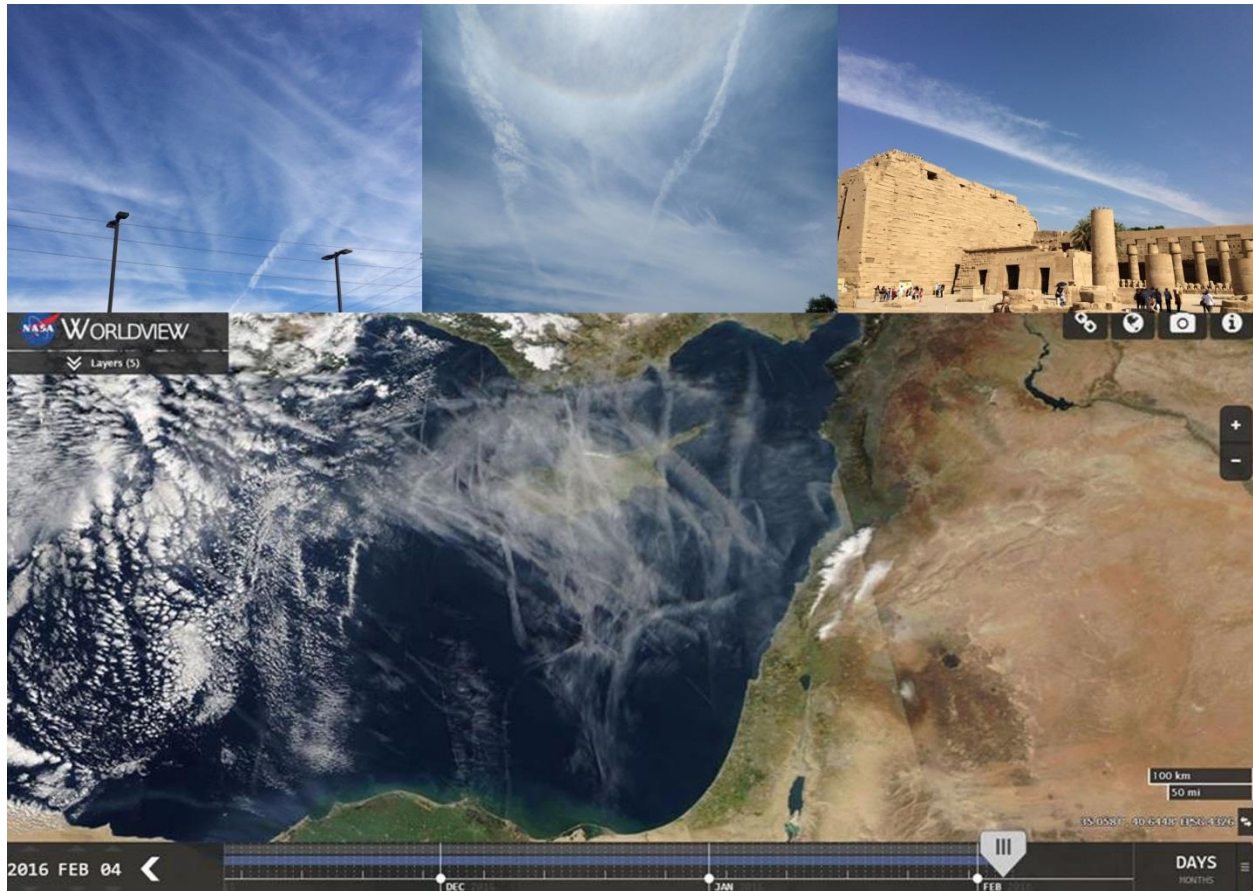


Fig. 1. Deliberate jet-emplaced aerial particulate pollution trails. **Upper left and center:** San Diego, California (USA) on days devoid of natural clouds. **Upper right:** Luxor (Egypt). [Photos by the author (JMH)] **Lower:** Republic of Cyprus blanketed by aerosolized particulate trails. [NASA Worldview satellite image from February 4, 2016]