

Chemtrails Biological Impacts

Exposed:

[Chemtrails Exposed: Biological Impacts](#)

by Peter A. Kirby, [Activist Post](#)

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This is another chapter excerpted from the author's book [Chemtrails Exposed: A New Manhattan Project](#). It is being released to promote the [Kickstarter campaign](#) designed to free-up Michael Murphy's lost 3rd geoengineering exposé "UNconventional Grey."

When airplanes routinely dump megatons of toxic garbage into our atmosphere as they have been doing for twenty years plus now, the most obvious question is: What are the biological impacts? What are the environmental implications of very small coal fly ash particles entering our bodies and fouling our biosphere? As one might guess, the implications are grave. Although the geoengineers will undoubtedly tell us that everything is fine, the best available evidence shows that the general population's health is being negatively impacted, at least hundreds of thousands of people are dying, and our environment is being summarily wrecked as well. These are the biological impacts of the New Manhattan Project.

Particulate matter

The inhalation of aerosolized particulate matter has generally harmful human health impacts. This is not a matter of debate. Common sense and many studies show this. A slew of studies referenced at the end of this chapter shows that inhalation of fine particulate matter is associated with: Alzheimer's disease, risk for stroke, risk for cardiovascular disease,

lung inflammation and diabetes, reduced renal (kidney) function in older males, morbidity and premature mortality, decreased male fertility, low birth weight, onset of asthma, and increased hospital admissions.

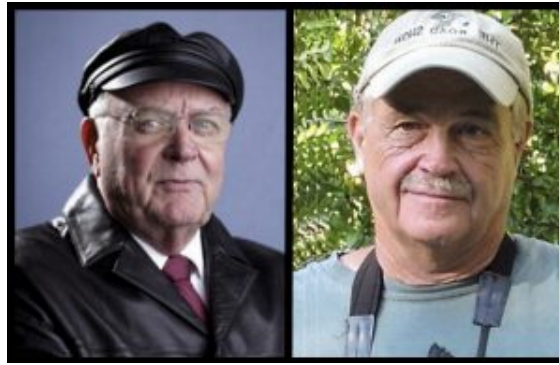
Coal fly ash

As far back as October of 1979, a study was performed about the health effects of aerosolized coal fly ash. Unsurprisingly, the authors of the study found that exposure to aerosolized coal fly ash through the lungs causes harm. In other news, the geniuses at the World Health Organization found that bullets fired from guns can kill people.

We should be thankful that the good Dr. Marvin Herndon has recently produced a series of peer-reviewed, published journal articles detailing the health effects of exposure to that specific material being routinely pumped out of jet aircraft. His first paper in this area titled "Coal Fly Ash Aerosol: Risk Factor for Lung Cancer," published in February of 2018, was co-authored by Dr. Mark Whiteside, MD, MPH, the Medical Director of the Monroe County, Florida Department of Health. Herndon and Whiteside found that coal fly ash has lots of nasty, cancer-causing stuff in it. The authors write:

"CFA [coal fly ash] contains a variety of potentially carcinogenic substances including aluminosilicates, an iron oxide-containing magnetic fraction, several toxic trace elements, nanoparticles, and alpha-particle-emitting radionuclides. Silica, arsenic, cadmium, and hexavalent chromium are found in CFA and all have been associated with increased lung cancer risk."

Further, the authors write, "Chronic exposure to aerosolized CFA, emplaced in the atmosphere for climate intervention, may be an important, yet unrecognized, environmental risk factor for development of lung cancer."



Doctors Herndon and
Whiteside

As we can see from the passage above and as many have feared, Dr.s Herndon and Whiteside have found that at least some of these atmospheric coal fly ash particles are nano-sized. This is a concern because when nano-sized particles are inhaled, they are so small that they go directly into the blood stream and right into the brain, often causing a host of neurological disorders. Nano-sized particles are so small that one ingests them through one's skin.

Herndon and Whiteside teamed up again for the March 2018 publication of their paper "Aerosolized Coal Fly Ash: Risk Factor for Neurodegenerative Disease." The authors write:

"The recent finding of spherical exogenous magnetite (Fe_3O_4) nanoparticles in the brain tissue of persons with dementia suggests an origin in air pollution produced by coal fly ash. The primary components of coal fly ash, iron oxides and aluminosilicates, are all found in the abnormal proteins that characterize Alzheimer's dementia. The presence of these substances in brain tissue leads to oxidative stress and chronic inflammation. Energy absorbed by magnetite from external electromagnetic fields may contribute to this neuropathology."

Later, in May of 2018, Herndon and Whiteside were published once again. This time, their paper titled "Aerosolized Coal Fly Ash: Risk Factor for COPD and Respiratory Disease" found that:

“Aerosolized CFA [coal fly ash] is a particularly hazardous form of deliberate air pollution. Ultrafine particles and nanoparticles found in coal fly ash can be inhaled into the lungs and produce many toxic effects including decreased host defenses, tissue inflammation, altered cellular redox balance toward oxidation, and genotoxicity. Oxidative stress and chronic inflammation can predispose to chronic lung disease. Recognition and public disclosure of the adverse health effects of geoengineering projects taking place in our skies, and their concomitant cessation will be necessary to prevent an ever-widening epidemic of COPD and other respiratory illnesses.”

Rounding out this duo's series of papers on the Human health impacts of chemtrails, Herndon and Whiteside wrote a November 2019 paper titled “Geoengineering, Coal Fly Ash and the New Heart-Iron Connection: Universal Exposure to Iron Oxide Nanoparticulates.” The authors write:

“Coal fly ash is a rich source of nano-sized metal, iron oxide, and carbonaceous particles. Previous findings revealed that coal fly ash is widely utilized in undisclosed tropospheric aerosol geoengineering. Proper iron balance is central to human health and disease, and the harmful effects of iron are normally prevented by tightly controlled processes of systemic and cellular iron homeostasis. Altered iron balance is linked to the traditional risk factors for cardiovascular disease. The iron-heart hypothesis is supported by epidemiological, clinical, and experimental studies. Biogenic magnetite (Fe_3O_4) serves essential life functions, but iron oxide nanoparticles from anthropogenic sources cause disease. The recent finding of countless combustion-type magnetic nanoparticles in damaged hearts of persons from highly polluted areas is definitive evidence of the connection between the iron oxide fraction of air pollution and cardiovascular disease. Spherical magnetic iron oxide particles found in coal fly ash and certain vehicle emissions

match the exogenous iron pollution particles found in the human heart. Iron oxide nanoparticles cross the placenta and may act as seed material for future cardiovascular disease. The pandemic of non-communicable diseases like cardiovascular disease and also rapid global warming can be alleviated by drastically reducing nanoparticulate air pollution. It is crucial to halt tropospheric aerosol geoengineering, and to curb fine particulate emissions from industrial and traffic sources to avoid further gross contamination of the human race by iron oxide-type nanoparticles."

Now that we have seen the Human health impacts of aerosolized coal fly ash, we will now take a look at the Human health impacts of some known constituents of coal fly ash.

Aluminum

As evidenced by voluminous rainwater sample lab reports (ch 1), chemtrails have been shown to consist significantly of aluminum oxide. Aluminum is a common component of coal fly ash. As we have learned from Dr.s Herndon and Whiteside, these particles can be nano-sized.

Aluminum nanoparticles are nasty stuff. A material safety data sheet (MSDS) produced by US Research Nanomaterials, Inc. says that they can cause: respiratory problems, skin irritation, eye irritation, tumors, Alzheimer's, pulmonary disease, neoplasms, and gastric or intestinal disorders. This MSDS also states that people coming in contact with aluminum nanoparticles should wear a respirator and a fully protective, impervious suit.

A 2016 paper titled "Assessing the Direct Occupational and Public Health Impacts of Solar Radiation Management with Stratospheric Aerosols" says that Aluminum aerosols will target these bodily systems: respiratory, cardiovascular, hematologic (blood), musculoskeletal (muscles & bones), endocrine (glands), immunologic, and neurologic (brain). They also say exposure to small atmospheric aluminum particles can

cause cancer and death.

It appears coincidental that Wright-Patterson Air Force Base has studied the biological impacts of aerosolized aluminum. In March 2001, the Air Force Research Laboratory at Wright-Patterson published a study titled "In Vitro Toxicity of Aluminum Nanoparticles in Rat Alveolar Macrophages." Scientists exposed rats to airborne, nano-sized aluminum oxide particles. The authors concluded:

"Aluminum oxide nanoparticles displayed significant toxicity after 96 and 144 hours post exposure at high doses (100 and 250 µg/ml). Aluminum nanoparticles also showed slight toxicity after 24 hours at high doses (100 and 250 µg/ml). When these cells were dosed at lower non toxic levels (25 µg/ml) Al 50, 80, 120 nm caused a significant reduction in phagocytosis. Even at a dose as low as 5 µg/ml Al 50 nm still caused a significant reduction. None of these nanoparticles caused the induction of nitric oxide, TNF-alpha, or MIP-2, important components in inflammatory responses. In summary, based on viability aluminum nanoparticles appear to be slightly toxic to rat alveolar macrophages. However, there was a significant reduction in phagocytic function of macrophages."

In other words, they found that even at low doses, forcing rats to breathe in tiny aluminum particles screwed up their lungs. The induced lack of phagocytes means that the rats' immune systems (especially in the lungs) became unable to fight off invading harmful organisms.

"In Vitro Toxicity of Aluminum Nanoparticles in Rat Alveolar Macrophages" was but one of a series of studies produced by Wright-Patterson pertaining to aluminum nanoparticle exposure. Wright-Patterson also produced a 2010 study titled "Nanosized Aluminum Altered Immune Function" in which they found that inhaled aluminum nanoparticles impair human immune systems. The authors again noted that nanoparticles have more deleterious health effects than do larger sized particles.

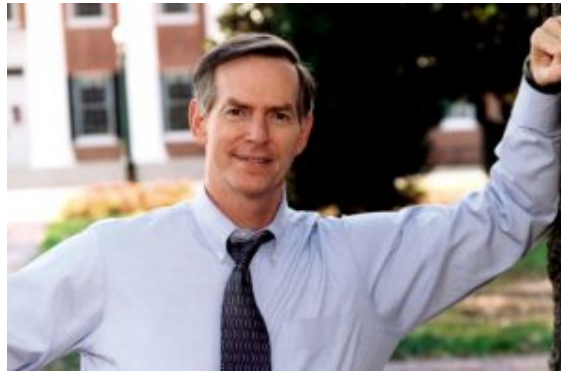
Curiously, “Nanosized Aluminum Altered Immune Function” also states that we are prone to inhale aluminum nanoparticles because they are used in jet fuels. This information, makes yet another case for aluminum-spiked jet fuels. All this is extremely interesting when one considers Wright-Patterson’s involvement in the New Manhattan Project such as that which was documented in chapter 5.

A 2009 paper titled “Manufactured Aluminum Oxide Nanoparticles Decrease Expression of Tight Junction Proteins in Brain Vasculature” found that, due to brain cell death, aluminum exposure can cause: Alzheimer’s, stroke, reperfusion, hypoxia, mitochondrial disease, and general vascular dysfunction.

In a 2012 paper written by one of the world’s top neurosurgeons (now retired), many neurological diseases are linked to aluminum exposure. Russell Blaylock’s “Aluminum Induced Immunoexcitotoxicity in Neurodevelopmental and Neurodegenerative Disorders” found a link between aluminum exposure and: Alzheimer’s, Parkinson’s, Huntington’s, Pick’s, HIV dementia, multiple sclerosis, viral encephalopathies, chronic traumatic encephalopathy, and amyotrophic lateral sclerosis (ALS / Lou Gehrig’s disease). In this paper, Dr. Blaylock also found that aluminum exposure is linked to: impaired cognition, poor memory, impaired learning, poor attention, social withdrawal, irritability, reduced food and water intake and depression. Not only that, but Dr. Blaylock cites another paper here showing how extremely small aluminum particles like the ones used in today’s New Manhattan Project can intensify adverse health reactions.

Dr. Blaylock has provided us with some impressive evidence for a causal relationship between chemtrails and Alzheimer’s here. He tells us that the aluminum nanoparticles we constantly inhale are carried directly to the part of the brain that is first affected by Alzheimer’s disease AND most severely affected by Alzheimer’s disease. On March 28, 2013 Dr. Blaylock went on the *Linderman Unleashed* radio program. The

host asked him how he became chemtrail aware and Dr. Blaylock said this:



Dr. Russell Blaylock, MD

"Well, you know, the connection has been the aluminum in the vaccines. I wrote several articles about the effects of the adjuvants in vaccines including the mercury and the aluminum effect.

"Then I found some articles about the chemtrails and there was a lot being said about it and I wasn't too sure whether it was true or not because in my state we rarely saw them. But as I started looking on the Internet and I would see these states in which there were these criss-cross patterns and they were very tight patterns and geometrical shapes where it was obvious that it was a purposeful covering of the atmosphere with these patterns and the trails were so long. Well now, you know, we're starting to see them in my state and as I look at them, they go from to horizon to horizon. Well, you know, I've been alive long enough to know that jets never did that in the past and I see the same patterning effect now where they're criss-crossing; it's an obvious pattern.

"And so I look into the literature and some of the reports and YouTube videos and they were saying that they were dropping as one of the ingredients, aluminum. Well, I had done a fair amount of writing and research on the effect of aerosolized chemicals in the nose when you breathe them. And what we knew was that these particles tend to travel along the olfactory

nerves which are the smell nerves in the nose. And it travels directly to the part of the brain that has to do with memory and emotions; the hippocampus, the interlinal area, and the prefrontal cortex. And that you can trace these chemicals traveling along that nerve and depositing in this area of the brain.

“The other thing that was known is that if you aerosolize aluminum, it’s one of the metals that passes very easily along this track and directly into the brain. So it bypasses the blood-brain barrier and goes directly into the brain and accumulates. Well, if you do it in animals, it produces lesions, or damage in that area of the brain and the animal will begin to show changes of memory and learning and emotional changes.

“When we look at people who have Alzheimer’s disease, ironically, the highest concentration of aluminum in the brain is that same entry point; what’s called the interlinal cortex. And the levels continue to accumulate. So we have compelling evidence that aerosolized aluminum alone will enter the brain and produce damage to that critical area of the brain.

“The worst of all is the nano-sized. Nano-size means you make it such a small particle that it easily penetrates skin. It penetrates barriers in the body that normally metals cannot pass through. When you nano-size and produce these incredibly small particulate matter, it passes very easily. So when you nano-size aluminum and you use it in these aerosols through the nasal passages, it enters the brain in very high concentration and they find that the nano-sized aluminum in the brain is infinitely more toxic.

“Now one of the toxic reactions to aluminum is intense inflammation and activation of cells in the brain that are the immune cells called microglia. Aluminum is a very potent activator of these immune cells and that triggers the release of a powerful substance called glutamate which is an

excitotoxin that causes cells to die from an excitatory mechanism. Kinda complex mechanism, but it is a combination of inflammation and excitotoxicity. And I coined the term in the medical literature called immunoexcitotoxicity to describe that process. So, we know that occurs. We know it occurs very easily.

“Now, the reports are coming out now that what they’re spraying is nano-sized aluminum and the idea is the old concept of preventing global warming. And they nano-size the aluminum so it will stay in the upper atmosphere longer; supposedly as a reflective compound metal. The problem with that, even from a climatological description is that if you make it into cirrus-like clouds rather than reflecting it upward and out of the atmosphere, it reflects the heat downward and actually causes global warming. So, you know, you could envision that they’re doing this on purpose to make the atmosphere heat up so they can say, ‘See, the atmosphere is warming up.’

“But what I’m concerned about mainly is the medical effect and that’s because of these very strong connections between aluminum passing through this pathway into the brain [which] is so strongly connected with Alzheimer’s disease and other diseases of memory.

“If you’re aerosolizing this and spraying literally tons of it over the world, people are constantly breathing that aerosolized, nano-sized aluminum which will easily penetrate filters in your air-conditioning system [and] enter your home. So you’re breathing it 24 hours a day; producing high levels of aluminum in this part of the brain. And the consequences could be absolutely devastating. It could cause a huge increase in Alzheimer’s disease and inflammatory neurological disorders.

“I watched a YouTube which was a geoengineering conference that the government had put on. And in the conference, one of

the questions somebody in the audience asked was: What is the medical effect of spraying aluminum in the atmosphere? And the speaker said, 'Well, uh, we don't really know. But we're in the process of researching that.' Well, of course that was an absolute lie. We do know what it does. But the fact that they were admitting that in fact they were going to spray, they gave it in the future tense that they were going to spray aluminum, the evidence now from the examination by biologists and scientists around the world is that the aluminum level in the lakes and streams and trees is increasing enormously. Some areas have incredible elevations of aluminum in the groundwater and in the vegetation. So if this indeed is happening, we're looking at a medical catastrophe that's worldwide."

There is lots of other highly credible evidence available linking aluminum exposure to the diseases mentioned here. If you want more information, please search the term 'aluminum toxicity.' Expediency demands that we move on.

Barium

Rainwater sample test results from around the world consistently show barium as well, and barium can also be a component of coal fly ash. Barium is highly toxic. Barium material safety data sheets (MSDS) readily available online will inform you that barium is extremely hazardous in case of inhalation. Severe exposure to barium can cause lung damage, choking, unconsciousness and death. Many other barium oxide MSDSs go on and on in a similar fashion. The Centers for Disease Control and Prevention (CDC) says that barium oxide reacts violently with water while the atmosphere has lots of water in it and our bodies consist mostly of water. My science advisor says that barium titanate and barium sulfate have been used in atmospheric dispersions as well.

The aforementioned paper "Assessing the Direct Occupational and Public Health Impacts of Solar Radiation Management with

Stratospheric Aerosols” says that barium compounds used as atmospheric sprays target these Human bodily systems: respiratory, gastrointestinal, musculoskeletal, renal, metabolic, and neurologic. They also say barium compounds dispersed by aircraft as part of geoengineering programs can cause death.

Strontium

Rainwater sample test results as well as others such as ambient air sample test results collected by Dr. Herndon have also been showing a presence of strontium. Strontium can be a component of coal fly ash. It is not surprising, but, like aluminum and barium, strontium is highly toxic as well.

A strontium MSDS from Sigma-Aldrich states that it is corrosive. It causes burns when it comes in contact with the skin and can be absorbed through the skin. If one inhales it, the MSDS states that it is, “...extremely destructive to the tissue of the mucous membranes and upper respiratory tract.” The MSDS continues:

“Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.”

The Sigma-Aldrich MSDS finishes up by noting that the chemical, physical, and toxicological properties of strontium have not been thoroughly investigated.

Strontium hydroxide is even worse. Being that there is lots of water in the atmosphere, the atmospheric strontium produced as part of the New Manhattan Project may react with it and form the extremely caustic strontium hydroxide. Not only that, but don't forget that our bodies are comprised of mostly H₂O. Strontium in the atmosphere and inside of us has lots of opportunities to become strontium hydroxide. The Sigma-Aldrich MSDS cautions potential users to never expose strontium oxide

to water because it reacts violently.

Because strontium can be a component of coal fly ash, it is interesting to note that studies have been done concerning exposure to the strontium found in 'fly ash.' The CDC writes:

"Rats were exposed to aerosols of ^{85}Sr [strontium] carbonate, phosphate, fluoride, oxide, or titanate (particle sizes and doses not specified) (Willard and Snyder 1966). Greater than 99% of the initial lung burden of ^{85}Sr was cleared from the lung 5 days after inhalation of the carbonate, phosphate, fluoride, or oxide, whereas 60% of the ^{85}Sr remained in the lung after inhalation of the more insoluble strontium titanate.

"In rats exposed to airborne fly ash (sieved to have a particle diameter of distribution of 90% less than $20\text{ }\mu\text{m}$) for 6 hours, strontium was eliminated from the lung with a half-time of 23 days (observations were made for 30 days) (Srivastava et al. 1984b). One day after the exposure, the tissue: plasma strontium concentration ratios were 0.3–0.5 in the liver, kidney, small intestine, and heart. The report of this study does not indicate whether whole-body or nose-only exposures were utilized in the study; therefore, it is not possible to know for certain how much of the absorption may have resulted from ingestion of fly ash deposited on the animals. Furthermore, given the relatively large particle size of the fly ash, it is likely that deposition in the respiratory tract was largely in the tracheobronchial and nasopharyngeal region, from which the strontium may have been cleared mechanically to the esophagus and swallowed. Nevertheless, studies in which ^{89}Sr -enriched fly ash was instilled into the trachea of rats indicate that strontium in this form was partly absorbed and appeared in plasma and other tissues within days of the exposure (Srivastava et al. 1984a)."

The CDC goes on to note that the fly ash strontium

administered to the lab rats ended up mostly in the bones. After that, it appeared in (in order of prevalence): muscle, skin, liver, and kidneys. Those heady days of just dumping dry ice into clouds are long gone.

Mercury

Dr. J. Marvin Herndon produced a December 2017 paper co-authored by Mark Whiteside, MD in which the authors write specifically of the Human health impacts of mercury. It has been well known for a long time now that mercury is one of the most toxic substances on the planet and we now know that mercury is a common constituent of the coal fly ash currently being sprayed by the megaton. The authors write:

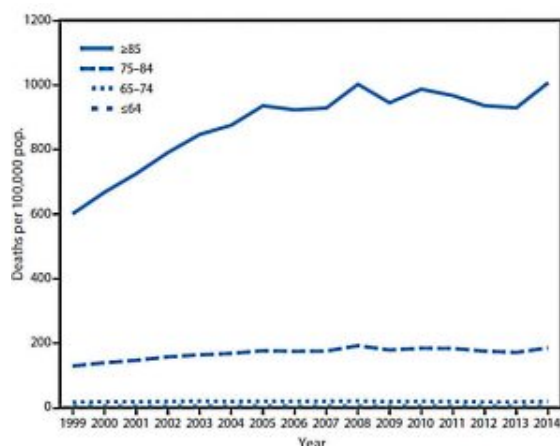
“Despite strengthened mercury emission regulations, mercury measured in rainwater is increasing. Since it is known that the upper troposphere contains oxidized, particle-bound mercury, it is likely that covert aerosolized coal fly ash sprayed into this region is a major source of mercury pollution. Mercury affects multiple systems in the body, potentially causing neurological, cardiovascular, genitourinary, reproductive, immunological, and even genetic disease.”

CDC rates of associated diseases

As this chapter has explained, chemtrails are associated with many diseases. As we have been assaulted by this New Manhattan Project for over twenty years now, it is no surprise that the best available data shows rates of the associated diseases going up significantly. Historical rates of every disease associated with chemtrail spray are not presented here due to a lack of CDC data. Every associated disease *with* available CDC data is presented.

Let's start with the most strongly correlated disease: Alzheimer's. According to the latest data from the CDC, from 1999 to 2014, age-adjusted rates of death from Alzheimer's

increased 54.5% with the 2014 number of total deaths at 93,541. That means that in 2014 alone we saw tens of thousands of additional American deaths from Alzheimer's. If one adds up all the additional deaths from Alzheimer's between 1999 and 2014, we're talking about hundreds of thousands of additional deaths. Let us recall that large-scale domestic spraying operations began in 1996.



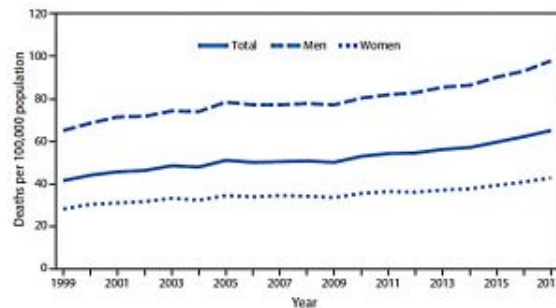
Age adjusted rates of
Alzheimer's disease
1999-2014

In a 2013 report, the CDC found that while deaths from other diseases such as cancer, heart disease, and stroke decreased significantly, Alzheimer's deaths increased 39%. They write, "Mortality from Alzheimer's disease has steadily increased during the last 30 years." Knowing what we now know, it is reasonable to assume that chemtrails have contributed greatly to this.

Not only have the rates of adult Alzheimer's disease been increasing, but a disease that used to be relegated to the elderly is now showing up in children. Reports have been pouring in from around the world documenting research into Niemann Pick Type C disease, also known as 'childhood Alzheimer's.' As previously mentioned, Dr. Blaylock has seen this phenomenon as well.

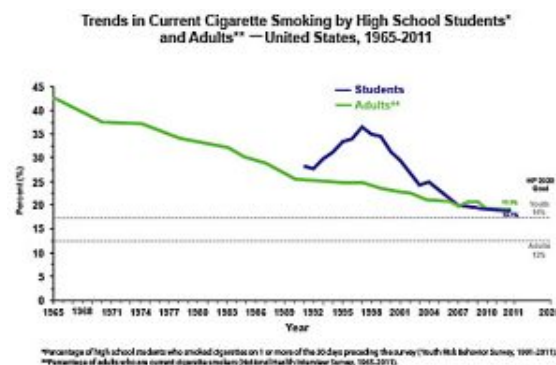
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Dr. Blaylock says that there is also a correlation between aluminum exposure and Parkinson's. The latest data from the CDC shows that between 1999 and 2017, the age-adjusted rate of Parkinson's disease in people aged 65 or older went from 41.7 per 100,000 to 65.3 per 100,000.



CDC rates of Parkinson's disease 1999-2017

Despite what the tobacco companies said in the 1950s, routinely breathing in particulate matter is bad for your lungs. It is for this reason that we now take a look at the CDC data pertaining to diseases associated with the routine inhalation of particulate matter such as COPD, asthma, and lung cancer. Although the CDC found that the rate of chronic pulmonary disease (COPD) was stable between 1998 and 2009, they also found that the prevalence of asthma rose during a similar period (between 2001 and 2010). The CDC also reports that between 1995 and 2011, smoking went from 35% among students and 25% among adults to 18% and 19% respectively. Concurrently, the CDC reports significant drops in the rate of lung cancer between 2002 and 2011.

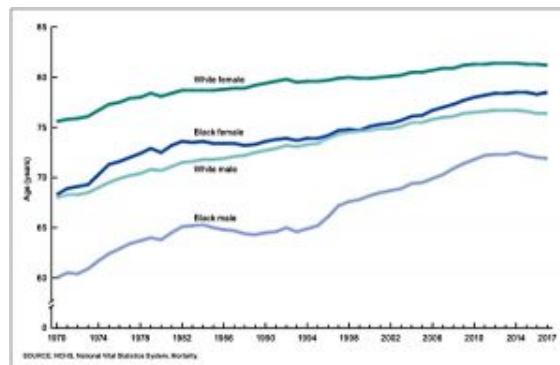


Rate of smoking from 1965-2011

With these big drops in the rate of smoking, one might assume that the rate of COPD and asthma would go down as well, instead of remaining stable. Chemtrails probably kept the rate of COPD stable while contributing to the prevalence of asthma. Lung cancer probably decreased because chemtrail exposure has not been as carcinogenic for your lungs as smoking. It's good to know that there are more carcinogenic things for your lungs than routine chemtrail exposure. Smoking cigarettes apparently fits that category. Moderate chemtrail exposure is probably better for you than inhaling burning plutonium too, but that doesn't mean it's ok.

Overall life expectancy

Very recently, we here in America have seen a slight reduction in our life expectancies. According to CDC data, for the first time in many decades, between 2016 and 2017 overall life expectancy at birth fell by .1 years.



CDC life expectancy 1970-2017

One might think, with all the much-touted breakthroughs in medicine, a growing health care industry, expanded access to better nutrition such as organic foods and supplements, and the like, that we would be experiencing *longer* average life expectancies, not shorter. Might chemtrails have something to do with it?

Early exposures

Although it appears that our bodies have been finding ways to better cope with this daily onslaught of aerosolized toxic waste, around the times when people were first exposed, emergency rooms filled up. William Thomas' aforementioned 2004 book *Chemtrails Confirmed* chronicles many of these examples. Thomas recounts the words of a registered nurse:

"Approximately December 16th or the 17th, while traveling north, I could see 'stripes' in the sky. It appeared as if someone took white paint on their fingers and from north to south ran their fingers through the sky. These contrails were evenly spaced and covered the whole sky! They covered it completely! When I was finished with the next visit, approximately 45 minutes, I came out of the house and found the whole sky was white. There was no definition in cloud pattern.

"Within the 24 hours I became very weak, feverish, and my asthma began to act up. I didn't think too much about it, until my boyfriend told me that many in his family started coming down with the same complaints. I also started noticing a lot of my patients and their family members were coming down with these symptoms at the same time. In our area we have one main hospital which I was the Supervisor of for four years. I worked there a total of six years. I stay in close contact with the nurses and physicians and am planning on investigating into this more. At that time, they complained of being extremely busy with respiratory diagnoses."

Another passage from *Chemtrails Confirmed* recounts the experiences of a restaurant owner from Oklahoma. The passage reads:

"On January 24, 1999 [Pat] Edgar reported that on, 'Monday, Tuesday and Wednesday and Thursday of last week, we were really hit hard with the contrails. I mean real bad. Everybody in this town is sick right now; sicker than a damn dog. It's

all in their head and their sinuses, and it hangs in the throat, (sore necks), ears ringing.'

"Edgar added: 'Some customers that frequent our business have stated that they have been to the doctor and the offices have been full of sick people. Same thing at the Indian clinic.'

"'People have to wait for hours because the waiting room is full. Some people have reported being on their third and fourth round of antibiotics and they are still ill. We noticed excessive contrails Thursday, Feb. 11th.'

"Edgar became ill the following day, and visited a doctor. From a friend he learned that Sparks regional hospital had over 500 people seeking medical attention at the emergency room for flu, or flu-like symptoms."

Others appearing in Thomas' book tell similar stories.

Bodily contamination testing

When we ingest aluminum, some of it eventually comes out in our hair and fingernails. There are many reports online of people finding high levels of chemtrail toxins in their hair and fingernails. Certain laboratories can analyze hair and fingernail samples for aluminum and other substances. If you are curious about your bodily contamination, one may get their hair tested by the Great Plains Laboratory or Analytical Research Labs. One can find their websites online.

Biospheric implications

There is evidence that chemtrails are changing soil pH. This could be very bad for our biosphere. As mentioned in the first chapter, anti-geoengineering activist Francis Mangels has a Bachelor of Science in forestry from the International School of Forestry at Missoula, spent 35 years with the U.S. Forest Service as a wildlife biologist and worked several years with the USDA Soil Conservation Service as a soil conservationist. In order to document the effect of chemtrail spray upon soil

pH, Mr. Mangels wrote on Oct. 30, 2009:

"The soil scientists from the USDA Soil Conservation Department visited private property east of Shasta Lake, California, on Oct. 27, 2009. Mr. Bailey, Komar, and Owens tested the pH with standard federal meters. All agreed the pH should be 5.5.

"Under Douglas fir, the pH was 7.4, astoundingly basic for that habitat.

"Under Ponderosa pine, at the precise soil-needle interface, I would expect a pH of 5. At that point, Bailey's meter showed 6.5. This is high for a microhabitat that should be very acid. Old soil surveys indicate this soil should be very acid, around pH of 5.5.

"I bought a house in Mt. Shasta old black oak/pine pasture in 2002, tested the pH at below 6, good for vegetable gardening. It was a major reason for purchase, and proceeded with highly acid composting of leaves and grass to drive the pH down or at least keep it low, as every master gardener knows. I added a touch of sulphur and avoided wood ash to insure acidity, and proceeded to teach organic gardening courses out of my yard through COS. The pH tests were an embarrassment because now my garden is pH 7, sometimes higher. This is the opposite of what should happen.

"The pH meter of Jon McClellan proceeded to show pH in McCloud gardens also running close to 7 or 8, which is too high for heavy organic mulch with no ashes. General lawns were also running over pH 7 under oaks and pines and fir trees. This is contrary to everything I learned in college and the Soil Conservation Service for 35 years. The old data sheets say these soils should be running at a pH of 5-6."



Francis Mangels

In the movie *What In the World Are They Spraying?*, Mr. Mangels says that when soil pH changes, soil arthropods (a vital link in our ecosystem) start to go away. This type of disruption could have negative effects up and down the food chain.

Reports of massive plant and animal die-offs potentially due to chemtrails are widespread. Spraying vast regions of the Earth with tens of thousands of megatons of toxic waste is probably contributing to the alarming rate of animal species extinction as well. Although many other factors are in play here, the chemtrails surely don't help. The Center for Biological Diversity reports that:

"Scientists estimate we're now losing species at 1,000 to 10,000 times the background rate, with literally dozens going extinct every day. It could be a scary future indeed, with as many as 30 to 50 percent of all species possibly heading toward extinction by mid-century."

Once again, our Spartacus with the dragon energy, Dr. J. Marvin Herndon, PhD has been on the case. Dr. Herndon has again teamed up with the Medical Director of the Monroe County, Florida Department of Health, Dr. Mark Whiteside, MD, MPH to publish a series of peer-reviewed, published journal articles addressing the biospheric implications of the ongoing and uncontrolled geoengineering experimentation and we will go over them here.

Let's start at the bottom of the food chain. In June of 2019 Herndon and Whiteside published a paper titled "Role of Aerosolized Coal Fly Ash in the Global Plankton Imbalance: Case of Florida's Toxic Algae Crisis." In this paper, the authors provide evidence for the assertion that the coal fly ash sprayed by the megaton into our biosphere is causing, among other things, an overabundance of harmful plankton blooms which, in turn, has more harmful effects. The authors write:

"Our objective is to review the effects the multifold components of aerosolized coal fly ash as they relate to the increasing occurrences of HABs [harmful algal blooms]. Aerosolized coal fly ash (CFA) pollutants from non-sequestered coal-fired power plant emissions and from undisclosed, although 'hidden in plain sight,' tropospheric particulate geoengineering operations are inflicting irreparable damage to the world's surface water-bodies and causing great harm to human health (including lung cancer, respiratory and neurodegenerative diseases) and environmental health (including major die-offs of insects, birds and trees). Florida's ever-growing toxic nightmare of red tides and blue-green algae is a microcosm of similar activity globally. Atmospheric deposition of aerosol particulates, most importantly bioavailable iron, has drastically shifted the global plankton community balance in the direction of harmful algae and cyanobacterial blooms in fresh and salt water."

A little further up the food chain we find insects. Herndon and Whiteside have been working in this area as well. In August of 2018 their paper titled "Previously Unacknowledged Potential Factors in Catastrophic Bee and Insect Die-off Arising from Coal Fly Ash Geoengineering" was published. In this paper, the authors substantiate a multitude of harmful, observed effects upon insects from chemtrail spray. We can stop wondering why bee populations are being decimated. The authors write:

"The primary components of CFA [coal fly ash], silicon,

aluminum, and iron, consisting in part of magnetite (Fe₃O₄), all have important potential toxicities to insects. Many of the trace elements in CFA are injurious to insects; several of them (e.g., arsenic, mercury, and cadmium) are used as insecticides. Toxic particulates and heavy metals in CFA contaminate air, water, and soil and thus impact the entire biosphere. Components of CFA, including aluminum extractable in a chemically-mobile form, have been shown to adversely affect insects in terrestrial, aquatic, and aerial environments. Both the primary and trace elements in CFA have been found on, in, and around insects and the plants they feed on in polluted regions around the world. Magnetite from CFA may potentially disrupt insect magnetoreception. Chlorine and certain other constituents of aerosolized CFA potentially destroy atmospheric ozone thus exposing insects to elevated mutagenicity and lethality levels of UV-B and UV-C solar radiation."

This information goes a long way towards explaining the tremendous drops in global insect populations lately. It's almost too scary to look into, but an Internet search of the term 'insect populations' will bring pages and pages of relevant results. Of course, many are blaming it on the dreaded global warming/climate change, but insect populations have done just fine throughout previous fluctuations in Earth's average temperature. In fact, insect populations have most probably done better in warmer climates, so maybe we should look instead at the gigantic aircraft routinely dumping megatons of toxic waste into our biosphere.

As noted, Francis Mangels has been observing a lack of insects as well. He logically attributes it to geoengineering. On July 19, 2017, Francis emailed to the author the following:

"Several streams were sampled for aquatic insects, and I likewise fished them hard to get stomach samples of trout. Total sample over 1000, lately around 400 stomach samples. Methods used were fairly casual, using typical nets for

streams in gravel substrates that appeared similar. Standard data was orders of aquatics per square foot, accuracy about 80% due to equipment. It was very easy to see which streams would have the most trout.

"The bottom fell out of the sampling from 2000 to 2008, and it continues today. All major orders of bugs took severe hits from an unknown source. Then I was contacted by Dane [Wigington], and logic said only sky pollution could hit all the streams at once in the same way.

"Likewise, the trout I caught before then always were loaded with bugs and etc. food both terra and aquatic. Ever since about 2006, the trout stomachs were almost empty, and I quit taking data because there was no data to take, for the most part. A bug here and there, mostly terrestrials, very small amounts and the trout got skinny over the years (except for those freshly planted, that soon lost the fat and got skinny too, as we say, poor condition factors). Very clear streams went almost barren, no bugs or trout either.

"Net sweeps in lots showed plenty of earwigs, pill bugs, ants, aphids, box elder bugs, any SUCKING types. However, the caterpillar types for the most part became very scarce, as did moths and butterflies as you would expect (leaf eaters eat the aluminum). I turned in a huge collection to the American butterfly association of CA, but damned if I could do it now....Lepidoptera are around, but rare now except for the cabbage butterfly and a few swallowtails. Point is, this distribution showed in the trout stomachs, which caused me to do the sweeps."

Further up the food chain we find birds. Dr.s Herndon and Whiteside published a paper in November of 2018 titled "Aerosolized Coal Fly Ash: A Previously Unrecognized Primary Factor in the Catastrophic Global Demise of Bird Populations and Species." In this paper, the authors find that coal fly ash is causing unprecedented bird die-offs.

The authors write, "Bird populations and species world-wide are experiencing die-offs on an unprecedented scale." A little later, the authors continue, "Aerosolized CFA [coal fly ash], a particularly toxic form of air pollution, contains multiple metals and elements well-known to adversely affect all portions of the avian life cycle, in aerial, terrestrial, and marine environments. Studies from around the globe reveal systemic contamination of birds by these elements." The authors conclude that, "Coal fly ash, including its use in ongoing atmospheric geoengineering operations, is a major factor in global bird die-off. The accelerating decline of birds parallels the catastrophic decline of insects, due in part to the same type of aerial pollution."

Doctors Herndon and Whiteside have also looked at the biological impacts of chemtrails upon bat populations. In January of this year (2020), they published a paper titled "Unacknowledged Potential Factors in Catastrophic Bat Die-off Arising from Coal Fly Ash Geoengineering." In this paper, the authors find that bat populations worldwide are suffering a precipitous decline. The authors write:

"Bats are excellent mammalian bioindicators of environmental contaminants and it is known that their tissue contains high levels of metals and persistent organic pollutants. From a review of the literature, we show that the pollutant element ratios in bat tissue and bat guano are consistent with an origin in CFA-type air pollution. These findings suggest that CFA [coal fly ash], including its use in covert climate engineering operations, is an unacknowledged factor in the morbidity and mortality of bats. Bats, therefore, are an important 'canary in the coal mine' pointing to the urgency of halting covert climate engineering and greatly reducing ultrafine particulate air pollution."

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As we saw at the beginning of this section, with all the

professionally observed soil pH anomalies, plants are not doing very well under this New Manhattan Project either. Doctors Herndon, Whiteside and other co-authors have been doing work in these areas as well. In a series of published, peer-reviewed journal articles, they have found that a combination of factors, all caused by the spraying of coal fly ash, are causing mass die-offs of global vegetation. They found that trees, in particular, are weakened by increased UV radiation, desiccation, and toxicity – all caused by chemtrails. Once a tree is weakened by this trifecta, it becomes susceptible to insect infestations, fungal infections, and other biotic factors such as bacteria and viruses.

The result of all this is dry, dead and dying vegetation. An abundance of dry, dead and dying vegetation makes forest fires occur more often and burn more furiously. Herndon *et al.* find that this is most probably why we have seen such tremendously large forest fires lately. The increased levels of UV radiation noted by Herndon *et al.* as being harmful to vegetation, are also harmful to Humans as well as phytoplankton, coral, and insects.

Silver iodide

The conventional weather modification industry has been openly spraying vast areas of the United States with silver iodide since 1947. The super-secret New Manhattan Project only started spraying us with coal fly ash in 1996. Hence, the vast majority of the weather modification and atmospheric sciences literature is geared towards the dispersion of silver iodide. Although silver iodide is not what is used in today's New Manhattan Project, as a side issue, let's take a look at the scientific evidence (or lack thereof) concerning the biological impacts of silver iodide. Past is prelude.

Considering that this issue is the most obvious question and of grave importance, the lack of publicly available research pertaining to the biological impacts of silver iodide

dispersion is quite shocking. You may read the 746 page, 1978 Congressional Research Service report on weather modification. You may read all 21 of the Interdepartmental Committee for Atmospheric Sciences reports or all of the National Science Foundation annual weather modification reports. You may read scores of weather modification reports, book after book, and myriad reports and papers about weather modification and the atmospheric sciences. But nowhere in any of these documents may you find an adequate examination of biological impacts and specifically human health impacts caused by exposure to atmospheric silver iodide. Only after reading a stack of documents about a yard high, did your author finally find a report containing an adequate discussion of this topic.

A popular silver iodide material safety data sheet describes silver iodide as, "Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, [and] of inhalation." Unbelievably, the authors of this data sheet write that much of the toxicology information is NOT AVAILABLE. They've been spraying us with this stuff since 1947 and the toxicology information is not available?! Equally as unbelievable, to date, no publicly available, long-term studies have been done.

It is widely suggested that exposure to silver iodide causes argyria – characterized by a blue-grey discoloration of the eyes, skin, mucous membranes, and internal organs. Does that sound healthy? Another MSDS produced by Fisher Scientific reads:

"Chronic ingestion of iodides during pregnancy has resulted in fetal death, severe goiter, and cretinoid appearance of the newborn. Prolonged exposure to iodides may produce iodism in sensitive individuals. Symptoms could include skin rash, running nose and headache."

In spite of this information, the historical weather modification literature notes a lack of data. A 1966 National

Science Foundation report stated, "The present state of knowledge places uncomfortable limits on the prediction of the biological consequences of modifying the weather." A 1969 Bureau of Reclamation report noted, "There has so far not been a single biological field study completed and reported in the literature specifically designed to identify any aspect of the ecological effects of weather modification." A 1972 study conducted by the Council on Environmental Quality stated, "Projects may have significant adverse environmental effects, ranging from immediate hazards to life and property to long-term alterations in land use patterns and threats to ecological systems."

Weather modifiers have exhibited a pattern of dismissing the potentially harmful effects of substances used in weather modification activities. In 1967 weather modifier Archie Kahan, writing for the Bureau of Reclamation, dismissed concerns about the use of silver iodide as he conflated the biological impacts of silver iodide with its efficacy as a nucleant and any possible hazardous weather that might arise from its use.

In 1972, decades after silver iodide was first used as a nucleant, Bernard Vonnegut and another atmospheric scientist by the name of Ronald Standler wrote a biology paper published in the *Journal of Applied Meteorology* that mollified concerns about their activities. Although the biological impacts of prolonged silver iodide dispersion has implications not only for Human health, but also for the health of the entire biosphere, the paper concerns itself almost exclusively with impacts upon Human health. The questionable biological impacts of their activities pertaining to plant and animal life is glossed over only briefly. They note that prolonged exposure to silver iodide has been known to cause Humans to exhibit an ashen appearance, but they claim that this is not of particular concern. They also dismiss concerns about silver iodide's ability to cause a yellowing of the skin when

exposure is topical. They even dismiss two examples of individuals having been significantly harmed by exposure to silver iodide. Their paper is full of phrases like 'seem to be' and 'we do not expect' because much of what is presented in the paper is assumptions and extrapolations based on other people's work rather than any scientific findings of their own.

The vast majority of research done in this area does not even concern itself with Human health impacts or biospheric contamination. Rather, it focuses on the ancillary issue of how plants and animals may be affected by either more or less rainfall. The work that is publicly available is mostly cursory. In the vast majority of cases where the subject is even so much as broached, the literature quickly follows with assurances that there are probably no adverse effects and that further study is not necessary.

Thankfully, some research indicating silver iodide's negative biological impacts has surfaced. It is not good news, but we need to hear it. Evidence suggests that it is exceptionally bad for organisms further down the food chain. The aforementioned 1969 Bureau of Reclamation report also noted:

"Silver compounds are much more toxic to fish than to terrestrial vertebrates. Some of the higher concentrations of Ag recorded in precipitation from seeded storms are comparable to the lowest concentrations lethal to fish in the short run. In one set of experiments, sticklebacks were able to withstand no more than 0.003 ppm Ag in water at 15-18° C. The fish survived one week at 0.004 ppm, four days at 0.01 ppm, and but one day at 0.1 ppm."

This 1969 report also found silver to be, "...highly toxic to microorganisms...." The report continues:

"Many investigators have placed Ag at or near the top of the list among heavy metals in toxicity to fungi, slime molds, and

bacteria. Water containing 0.015 ppm Ag from contact with specially prepared metal has exhibited bacteriocidal activity. 0.006 ppm Ag has killed E. coli in 2 to 24 hours, depending on numbers of bacteria. Bacteriocidal activity in this context usually implies death of 9.99% or so of the cells present."

Killing fungi, E. coli, and slime molds may sound like a good thing. But in the context of our complex and interdependent biosphere, it is not. Our overall ecosystem needs slime molds and the like. These things are vital links in the food chain.

Why does the conventional weather modification and atmospheric sciences literature not sufficiently address the issue of silver iodide's biological impacts? They wouldn't have anything to hide, would they? That which is not disclosed is often more incriminating than that which is. Although today's Weather Modification Association claims it is completely safe, they have a conflict of interest and they do not have enough data to sufficiently back up their claims.

The bottom line is that there is evidence showing that silver iodide has negative biological impacts. We cannot know for sure that spraying this stuff is safe if no public long term studies have been done. But they have been going ahead and doing it anyway – just like today's geoengineers.

Conclusions

Although it is currently not feasible to completely assess the damage to Earth's biosphere caused by this New Manhattan Project, the available evidence does not paint a pretty picture. This is an area of study and body of work which should be vastly expanded and updated in the coming years and decades. We already know that massive quantities of atmospheric coal fly ash are bad for Humans, animals, insects, plants, and the overall environment. In Humans, the rates of diseases linked to exposure are on the rise. Many people became very sick when first exposed. The historical precedent set by the conventional weather modification industry mandates

irresponsibility. When geoengineers say that their activities are harmless, we have plenty of good reasons to not believe them.

References

“An Open Letter to Members of AGU, EGU, and IPCC Alleging Promotion of Fake Science at the Expense of Human and Environmental Health and Comments on AGU Draft Geoengineering Position Statement” a paper by J. Marvin Herndon, published by *New Concepts in Global Tectonics Journal*, September 2017

Kampa, M.; Castanas, E. Human health effects of air pollution *Environmental Pollution* 2008, 151, 362-367.

Calderon-Garciduenas, L.; Franko-Lira, M.; Mora-Tiscareno, A.; Medina-Cortina, H.; Torres-Jardon, R.; et al. Early alzheimer's and parkinson's disease pathology in urban children: Friend versus foe response – it's time to face the evidence. *BioMed Research International* 2013, 32, 650-658.

Moulton, P.V.; Yang, W. Air pollution, oxidative stress, and alzheimer's disease. *Journal of Environmental and Public Health* 2012, 109, 1004-1011.

Beeson, W.L.; Abbey, D.E.; Knutsen, S.F. Long-term concentrations of ambient air pollutants and incident lung cancer in california adults: Results from the ahsnog study. *Environ. Health Perspect.* 1998, 106, 813-822.

Hong, Y.C.; Lee, J.T.; Kim, H.; Kwon, H.J. Air pollution: A new risk factor in ischemic stroke mortality. *Stroke* 2002, 33, 2165-2169.

Haberzettl, P.; Lee, J.; Duggineni, D.; McCracken, J.; Bolanowski, D.; O'Toole, T.E.; Bhatnagar, A.; Conklin, D., J. Exposure to ambient air fine particulate matter prevents vegf-induced mobilization of endothelial progenitor cells from bone marrow. *Environ. Health Perspect.* 2012, 120, 848-856.

Potera, C. Toxicity beyond the lung: Connecting pm_{2.5}, inflammation, and diabetes. *Environ. Health Perspect.* 2014, 122, A29

Mehta, A.J.; Zanobetti, A.; Bind, M.-A., C.; Kloog, I.; Koutrakis, P.; Sparrow, D.; Vokonas, P.S.; Schwartz, J.D. Long-term exposure to ambient fine particulate matter and renal function in older men: The va normative aging study. *Environ. Health Perspect.* 2016, 124(9), 1353-1360.

Dai, L.; Zanobetti, A.; Koutrakis, P.; Schwartz, J.D. Associations of fine particulate matter species with mortality in the united states: A multicity time-series analysis. *Environ. Health Perspect.* 2014, 122,

Dockery, D.W.; Pope, C.A.I.; Xu, X.P.; Spengler, J.D.; Ware, J.H.; et al. An association between air pollution and mortality in six U. S. Cities. *N. Eng. J. Med.* 1993, 329, 1753-1759.

Pope, C.A.I.; Ezzati, M.; Dockery, D.W. Fine-particulate air pollution and life expectancy in the united states. *N. Eng. J. Med.* 2009, 360, 376-386.

Pires, A.; de Melo, E.N.; Mauad, T.; Saldiva, P.H.N.; Bueno, H.M.d.S. Pre- and postnatal exposure to ambient levels of urban particulate matter (pm_{2.5}) affects mice spermatogenesis. *Inhalation Toxicology: International Forum for Respiratory Research*: DOI: 10.3109/08958378.2011.563508 2011, 23.

Ebisu, K.; Bell, M.L. Airborne pm_{2.5} chemical components and low birth weight in the northeastern and midatlantic regions of the united states. *Environ. Health Perspect.* 2012, 120, 1746-1752.

Tetreault, L.-F.; Doucet, M.; Gamache, P.; Fournier, M.; Brand, A.; Kosatsky, T.; Smargiassi, A. Childhood exposure to ambient air pollutants and the onset of asthma: An

administrative cohort study in quebec. *Environ. Health Perspect.* 2016, 124(8), 1276.

Bell, M.L.; Ebisu, K.; Leaderer, B.P.; Gent, J.F.; Lee, H.J.; Koutrakis, P.; Wang, Y.; Dominici, F.; Peng, R.D. Associations of pm2.5 constituents and sources with hospital admissions: Analysis of four counties in connecticut and massachusetts (USA). *Environ. Health Perspect.* 2014, 122, 138-144.

“The Effect of Reaerosolized Fly Ash from an Atmospheric Fluidized Bed Combustor on Murine Alveolar Macrophages” a paper by Patricia C. Brennan, Frederick R. Kirchner, and William P. Norris, published by Argonne National Laboratory, 1979

“Coal Fly Ash Aerosol: Risk Factor for Lung Cancer” a paper by Dr. Mark Whiteside and J. Marvin Herndon, PhD, published by the *Journal of Advances in Medicine and Medical Research*, February 2018

“Aerosolized Coal Fly Ash: Risk Factor for Neurodegenerative Disease” a paper by Dr. Mark Whiteside and J. Marvin Herndon, PhD, published by the *Journal of Advances in Medicine and Medical Research*, March 2018

“Aerosolized Coal Fly Ash: Risk Factor for COPD and Respiratory Disease” a paper by Dr. Mark Whiteside and J. Marvin Herndon, PhD, published by the *Journal of Advances in Medicine and Medical Research*, May 2018

“Geoengineering, Coal Fly Ash and the New Heart-Iron Connection: Universal Exposure to Iron Oxide Nanoparticulates” a paper by Dr. Mark Whiteside and J. Marvin Herndon, PhD, published by the *Journal of Advances in Medicine and Medical Research*, November 2019

“Weather and Climate Modification: Report of the Special Commission on Weather Modification” by the National Science Foundation, 1965

Aluminum oxide material safety data sheet by US Research Nanomaterials, Inc., 2013

“Assessing the Direct Occupational and Public Health Impacts of Solar Radiation Management with Stratospheric Aerosols” a paper by Utibe Effiong and Richard L. Neitzel, published in *Environmental Health*, 2016

“In Vitro Toxicity of Aluminum Nanoparticles in Rat Alveolar Macrophages” a report by Andrew Wagner, Charles Bleckmann, and E. England of the Air Force Institute of Technology, Krista Hess of Geo-Centers, Inc., Dayton, Ohio, and Saber Hussain and John J. Schlager of the Air Force Research Laboratory, Human Effectiveness Directorate, Applied Biotechnology Branch, Wright-Patterson AFB, published by the Air Force Research Laboratory, Human Effectiveness Directorate, Applied Biotechnology Branch, Wright-Patterson AFB, 2001

“Nanosized Aluminum Altered Immune Function” a paper by Laura K. Braydich-Stolle, Janice L. Speshock, Alicia Castle, Marcus Smith, Richard C. Murdock, and Saber M. Hussain, published by the American Chemical Society, 2010

“Manufactured Aluminum Oxide Nanoparticles Decrease Expression of Tight Junction Proteins in Brain Vasculature” a paper by Lei Chen, Robert A. Yokel, Bernhard Henning, and Michal Toborek, published by the *Journal of Neuroimmune Pharmacology*, December, 2008

“Aluminum Induced Immunoexcitotoxicity in Neurodevelopmental and Neurodegenerative Disorders” a paper by Dr. Russell L. Blaylock, as published in *Current Inorganic Chemistry*, 2012

“Gila Activation Induced by Peripheral Administration of Aluminum Oxide Nanoparticles in Rat Brains” a paper by X. Li, H. Zheng, Z. Zhang, M. Li, Z. Huang, H.J. Schluesener, Y. Li, and S. Xu, published in *Nanomed*, 2009, 5, (4), 473-479

Strontium oxide material safety data sheet by Sigma- Aldrich,

2007

"Aluminum Poisoning of Humanity and Earth's Biota by Clandestine Geoengineering Activity: Implications for India" a paper by J. Marvin Herndon, PhD, published by *Current Science*, 2015

"Strontium" a report by the Centers for Disease Control and Prevention

"Contamination of the Biosphere with Mercury: Another Potential Consequence of On-going Climate Manipulation Using Aerosolized Coal Fly Ash" a paper by Dr. Mark Whiteside and J. Marvin Herndon, PhD, published by the *Journal of Geography, Environment and Earth Science International*, December 2017

Inhaled Particles and Vapours a book edited by C.N. Davies, published by Pergamon Press, 1961

"Fine Particulate Air Pollution and Mortality in 20 U.S. Cities, 1987-1994" a report by Jonathan M. Samet, MD, Francesca Dominici, PhD, Frank C. Currier, PhD, Ivan Coursac, MS, and Scott L. Zeger, PhD, published by the *New England Journal of Medicine*, volume 343, number 24, 2000

Pulmonary Deposition and Retention of Inhaled Aerosols a book by Theodore F. Hatch, Paul Gross, the American Industrial Hygiene Association, and the United States Atomic Energy Commission, published by Academic Press, 1964

"Mortality from Alzheimer's Disease in the United States: Data for 2000 and 2010" a report by Betzaida Tejada-Vera, M.S., published by the U.S. Department of Health and Human Services, 2013

"Deaths from Alzheimer's Disease – United States, 1999-2014" an article by Christopher A. Taylor, PhD, Sujay F. Greenlund, Lisa C. McGuire, PhD, Hua Lu, MS, and Janet B. Croft, PhD, published in the *Morbidity and Mortality Weekly Report* of the

Centers for Disease Control and Prevention, May 26, 2017

“Age-Adjusted Death Rates for Parkinson’s Disease Among Adults Aged ≥ 65 Years – National Vital Statistics System, United States, 1999-2017” an article by Nancy Han, MS and Barnali Das, PhD, published by the *Morbidity and Mortality Weekly Report* of the Centers for Disease Control and Prevention, Sept. 6, 2019

“Chronic Obstructive Pulmonary Disease Among Adults Aged 18 and Over in the United States, 1998–2009” a report by Lara J. Akinbami, MD; and Xiang Liu, MSc, published by the U.S. Department of Health and Human Services, 2011

“United States Life Tables, 2017” an article by Elizabeth Arias, PhD and Jiaquan Xu, MD, published by *National Vital Statistics Reports*, June 24, 2019

“National Surveillance of Asthma: United States, 2001-2010” a report by the Centers for Disease Control, U.S. Department of Health and Human Services, November, 2012

Chemtrails Confirmed a book by William Thomas, published by Bridger House Publishers, 2004

What In the World Are They Spraying? a documentary film by Michael Murphy, Paul Wittenberger, and Edward G. Griffin, produced by Truth Media Productions, 2010

“Role of Aerosolized Coal Fly Ash in the Global Plankton Imbalance: Case of Florida’s Toxic Algae Crisis” a paper by Dr. J. Marvin Herndon, PhD and Dr. Mark Whiteside, MD, published by the *Asian Journal of Biology*, June 2019

“Previously Unacknowledged Potential Factors in Catastrophic Bee and Insect Die-off Arising from Coal Fly Ash Geoengineering” a paper by Dr. J. Marvin Herndon, PhD and Dr. Mark Whiteside, MD, published by the *Asian Journal of Biology*, August 2018

“Aerosolized Coal Fly Ash: A Previously Unrecognized Primary Factor in the Catastrophic Global Demise of Bird Populations and Species” a paper by Dr. J. Marvin Herndon, PhD and Dr. Mark Whiteside, MD, published by the *Asian Journal of Biology*, November 2018

“Unacknowledged Potential Factors in Catastrophic Bat Die-off Arising from Coal Fly Ash Geoengineering” a paper by Dr. J. Marvin Herndon, PhD and Dr. Mark Whiteside, MD, published by the *Asian Journal of Biology*, January 2020

“Previously Unrecognized Primary Factors in the Demise of Endangered Torrey Pines: A Microcosm of Global Forest Die-offs” a paper by J. Marvin Herndon, PhD, Dale D. Williams, and Dr. Mark Whiteside, MD, published by the *Journal of Geography, Environment and Earth Science International*, August 2018

“California Wildfires: Role of Undisclosed Atmospheric Manipulation and Geoengineering” a paper by J. Marvin Herndon and Dr. Mark Whiteside, MD, published by the *Journal of Geography, Environment and Earth Science International*, October 2018

“Deadly Ultraviolet UV-C and UV-B Penetration to Earth’s Surface: Human and Environmental Health Implications” a paper by J. Marvin Herndon, PhD, Raymond D. Hoisington and Dr. Mark Whiteside, MD, published by the *Journal of Geography, Environment and Earth Science International*, March 2018

Silver iodide material safety data sheet produced by ScienceLab.com, 2010

Silver iodide material safety data sheet produced by Fisher Scientific, 2009

National Science Foundation Report No. 66-3 as it appeared in a hearing before the Subcommittee on Oceans and Atmosphere of the Committee on Commerce, United States Senate, Ninety-fourth Congress, second session, Feb. 17, 1976

"Ecological Effects of Weather Modification: A Problem Analysis" a report by Charles F. Cooper and William C. Jolly, produced by the U.S. Department of the Interior, Bureau of Reclamation, Office of Atmospheric Water Resources, published by the University of Michigan, 1969

"Some Comments About Weather Modification Affects on Man's Environment" by Archie M. Kahan, Office of Atmospheric Water Resources, Office of Chief Engineer, Bureau of Reclamation, Department of the Interior, published by the Department of the Interior, 1967

"Federal Regulation of Weather Modification" a report by the Council on Environmental Quality, Washington, D.C., 1972 as it appeared in a hearing before the Subcommittee on Oceans and Atmosphere of the Committee on Commerce, United States Senate, Ninety-fourth Congress, second session, Feb. 17, 1976

Environmental Impacts of Artificial Ice Nucleating Agents a book edited and co-written by Donald A. Klein, published by Dowden, Hutchinson & Ross, 1978

"Weather Modification Association Position Statement on the Environmental Impact of Using Silver Iodide as a Cloud Seeding Agent" a paper by the Weather Modification Association, published by the Weather Modification Association, 2009

"Estimated Possible Effects of AgI Cloud Seeding on Human Health" a paper by Ronald B. Standler and Bernard Vonnegut, published by the *Journal of Applied Meteorology*, Volume 11, August 11, 1972

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