

## **Maroulla S. Gleaton**

As a physician, I would like to touch briefly on the impact of pollution on human health, as a way of explaining why it's so important to continue to reduce air pollution, develop cleaner sources of energy, and reduce human exposure to toxic chemicals in our environment.

There is a strong connection between the health of Maine's environment and the health of Maine people. My fellow physicians in the Maine Medical Association agree. This connection is so important that the public health risks of climate change and of environmental toxins have been a priority area for MMA's public health committee, and our general membership has adopted resolutions on both of these subjects. A copy of those resolutions has been provided in your folder.

Let me mention some shocking information which may help you understand why the physicians of Maine believe these issues are so important. First: the problem of asthma. Maine has one of the highest rates of asthma in the country – affecting more than 125,000 Maine people, including nearly 30,000 children. Asthma results in an estimated 65,000 school absences and more than 37,000 work absences each year in Maine. It is well known that air pollution can trigger asthma attacks, and it is clear that Mainers with asthma and respiratory difficulties – particularly children and seniors – end up in our emergency rooms with difficulty breathing when our pollution levels are high – particularly in the summer months. For some, these difficulties feel – and they are – life threatening.

Maine also has a problem with mercury pollution, resulting in a statewide warning for pregnant women and young children to restrict their levels of consumption of Maine's own river and lake fish due to high levels of mercury. As with air pollution, much of the mercury that ends up in Maine is from upwind power plants that send their pollution our way on the prevailing winds. Maine has worked hard to reduce our own air pollution, and has joined in regional initiatives to force upwind coal plants to clean up. I hope your Administration will continue these efforts

We also need to be concerned about human exposure to other toxic chemicals in the environment. Over the past decade, scientists have documented the extensive range of chemicals that are making their way into our bodies. The Center for Disease Control's most recent assessment found 212 chemicals in people's blood or urine samples—75 of which had never before been measured in the U.S. population.

Why is this a concern? Because the contaminants include dangerous compounds may cause birth defects, learning disabilities, cancer, and developmental impacts. Again, Maine has adopted important policies to limit toxic chemicals in consumer products, and to reduce our exposure to chemicals that can harm human health. These efforts also deserve your support because they help protect the health of Maine people and have been strongly supported by the medical community.

The bottom line: air and toxic chemical pollution remain a risk to Maine people, and I hope you will build on our State's successful efforts to reduce these threats.

# Maine Medical Association

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## Resolution RE: Toxic Substances Control Act September 2010

### **Resolution: A comprehensive scientific approach to safe use of environmental chemicals**

**WHEREAS**, Scientific studies at both the state and federal level, including several studies done in Maine, have found that there are measurable levels of multiple different chemicals with unknown health effects in human blood, urine, and hair; and

**WHEREAS**, Scientific studies have shown that some of these chemicals have been linked to adverse health effects, including endocrine disruption, in both humans and animals; and

**WHEREAS**, very little is known about the long term health effects of the approximately 80,000 chemicals in use today since only about 10% of them have been tested for human health impacts; and

**WHEREAS**, It is not possible to avoid exposure through lifestyle changes as these chemicals are all around us (toys, furniture, rugs, TVs, personal products) and most people are unaware of their exposure; and

**WHEREAS**, The Endocrine Society has published both a scientific summary of the health issues relating to chemicals in the environment and a position paper recommending a comprehensive scientific national approach to the use of environmental chemicals; and

**WHEREAS**, The Maine Legislature has already passed legislation establishing a foundation for a comprehensive approach to the use of safe chemicals in children's products, and

**WHEREAS**, The current federal law regulating chemicals in the environment, the Toxic Substances Control Act (TSCA), which was passed in 1976, is not based on science, and has succeeded in banning only five chemicals in its entire history and is known to be outdated; and

**WHEREAS**, It is vital that chemical companies and product manufacturers test their products for health effects before they market them to consumers, and that Government acts immediately to phase out dangerous chemicals as soon as there is evidence of harm and that dangerous or untested chemicals are not found in homes, people or animals;

**THEREFORE BE IT RESOLVED** that the Maine Medical Association work with partner organizations, the Maine Legislature and Maine people to build on the foundation established in Maine for a comprehensive, scientific approach to the use of chemicals in the environment and also work with the Maine Congressional Delegation to achieve reform of the Toxic Substances Control Act to assure the health and safety of Maine people for generations to come.

# Maine Medical Association

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Resolution RE: Global Climate Change

**Resolution # 4: Global Climate Change, submitted by the MMA Public Health Committee, was amended and approved as follows.**

**WHEREAS**, The United Nations Intergovernmental Panel on Climate Change, made up of over 2500 of the world's leading scientists, concluded that human induced climate change "is likely to have wide-ranging and mostly adverse impacts on human health, with significant loss of life," and

**WHEREAS**, A May 16<sup>th</sup>, 2009 article entitled "Managing the Health Effects of Climate Change" in the *Lancet* journal began with the statement: "Climate change is the biggest global health threat of the 21<sup>st</sup> century," and

**WHEREAS**, Climate change is progressing world wide far more rapidly than anticipated, and

**WHEREAS**, A leading contributor to the acceleration of climate change is the continuing use of fossil fuels, and

**WHEREAS**, Fossil fuels themselves not only result in severe damage to the environment but as well are highly toxic to humans, including being associated with release of mercury and other toxic materials, and

**WHEREAS**, multiple health effects are expected and are already being manifested, such as unpredictable and sudden changes in weather resulting in ice storms, hurricanes, and droughts with predictable health consequences including, but not limited to, carbon monoxide poisoning, crop failure with attendant starvation, heart attacks and heat strokes, panic, anxiety, depression, and

**WHEREAS**, there will be longer periods for insect breeding as well as new vectors being able to move into new areas resulting in increases in known diseases such as Lyme Disease, but also the appearance of entirely new diseases, and

**WHEREAS**, sea levels are expected to rise, resulting in drowning, salinization of water and soil, loss of homes, and potential massive dislocation of coastal residents, and

**WHEREAS**, Increases in ground level ozone, allergens and pollutants will result in severe respiratory problems particularly for vulnerable populations such as the young, the elderly, and those with chronic illnesses,

**THEREFORE BE IT RESOLVED that the Maine Medical Association work with Maine people and groups interested in health, the Maine Legislature and its congressional delegation to assure that rapid action is taken to:**

- Develop and sustain healthy alternative energy sources to reduce Maine's dependence on fossil fuels
- Track and disseminate data on environmental conditions, disease risks, and disease occurrence related to climate change
- Support enhancing the science base to better understand the relationship between climate change and health outcomes
- Communicate the health-related aspects of climate change, including risks and ways to reduce them, to the public and health providers
- Promote workforce development by helping to ensure the training of a new generation of competent, experienced public health staff to respond to the health threats posed by climate change.

## **Chemicals reported for the first time in the Fourth National Report on Human Exposure to Environmental Chemicals, 2009**

### Acrylamide Adducts

Acrylamide  
Glycidamide

### Total and Speciated Arsenic

Arsenic, Total  
Arsenic (V) acid  
Arsenobetaine  
Arsenocholine  
Arsenous (III) acid  
Dimethylarsinic acid  
Monomethylarsonic acid  
Trimethylarsine oxide

### Disinfection By-Products (Trihalomethanes)

Bromodichloromethane  
Bromoform (Tribromomethane)  
Chloroform (Trichloromethane)  
Dibromochloromethane (Chlorodibromomethane)

### Environmental Phenols

Bisphenol A (2,2-bis[4-Hydroxyphenyl] propane)  
Benzophenone-3 (2-Hydroxy-4-methoxybenzophenone)  
4-tert-Octyl phenol (4-[1,1,3,3-Tetramethylbutyl] phenol)  
Triclosan (2,4,4'-Trichloro-2'-hydroxyphenyl ether)

### Non-dioxin-like Polychlorinated Biphenyls

2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)  
2,2',3,5'-Tetrachlorobiphenyl (PCB 44)  
2,2',4,5'-Tetrachlorobiphenyl (PCB 49)

### Perchlorate

### Perfluorinated Compounds

Perfluorobutane sulfonic acid (PFBuS)  
Perfluorodecanoic acid (PFDeA)  
Perfluorododecanoic acid (PFDoA)  
Perfluoroheptanoic acid (PFHpA)  
Perfluorohexane sulfonic acid (PFHxS)  
Perfluorononanoic acid (PFNA)  
Perfluorooctane sulfonamide (PFOSA)  
Perfluorooctane sulfonic acid (PFOS)  
2-(N-Ethyl-Perfluorooctane sulfonamido) acetic acid (Et-PFOSA-AcOH)  
2-(N-Methyl-perfluorooctane sulfonamido) acetic acid (Me-PFOSA-AcOH)  
Perfluorooctanoic acid (PFOA)  
Perfluoroundecanoic acid (PFUA)

## Phthalate Metabolite

Mono-(2-ethyl-5-carboxypentyl) phthalate (MECPP)

## Polybrominated Diphenyl Ethers (PBDE) and Polybrominated Biphenyl

2,2',3,4,4',5',6-Heptabromodiphenyl ether (BDE 183)

2,2',4,4',5,5'-Hexabromobiphenyl (BB 153)

2,2',4,4',5,5'-Hexabromodiphenyl ether (BDE 153)

2,2',4,4',5,6'-Hexabromodiphenyl ether (BDE 154)

2,2',3,4,4'-Pentabromodiphenyl ether (BDE 85)

2,2',4,4',5-Pentabromodiphenyl ether (BDE 99)

2,2',4,4',6-Pentabromodiphenyl ether (BDE 100)

2,2',4,4'-Tetrabromodiphenyl ether (BDE 47)

2,3',4,4'-Tetrabromodiphenyl ether (BDE 66)

2,2',4-Tribromodiphenyl ether (BDE 17)

2,4,4'-Tribromodiphenyl ether (BDE 28)

## Volatile Organic Compounds (VOCs)

### Benzene

Chlorobenzene (Monochlorobenzene)

1,2-Dibromo-3-chloropropane (DBCP)

### Dibromomethane

1,2-Dichlorobenzene (o-Dichlorobenzene)

1,3-Dichlorobenzene (m-Dichlorobenzene)

1,4-Dichlorobenzene (p-Dichlorobenzene, Paradichlorobenzene)

1,1-Dichloroethane

1,2-Dichloroethane (Ethylene dichloride)

1,1-Dichloroethene (Vinylidene chloride)

cis-1,2-Dichloroethene

trans-1,2-Dichloroethene

Dichloromethane (Methylene chloride)

1,2-Dichloropropane

2,5-Dimethylfuran

Ethylbenzene

Hexachloroethane

Methyl-tert-butyl ether (MTBE)

Nitrobenzene

Styrene

1,1,2,2-Tetrachloroethane

Tetrachloroethene

Tetrachloromethane (Carbon tetrachloride)

Toluene

1,1,1-Trichloroethane (Methyl chloroform)

1,1,2-Trichloroethane

Trichloroethene (Trichloroethylene)

m- and p-Xylene

o-Xylene

<http://www.cdc.gov/exposurereport/updates.html>

