

# Professional Societies Statements Database

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**University of California, San Francisco**

**Program on Reproductive Health and the Environment**

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## **American Academy of Pediatrics:**

### **Chemical Management Policy: Prioritizing Children's Health**

4/25/11

The American Academy of Pediatrics recommends that chemical-management policy in the United States be revised to protect children and pregnant women and to better protect other populations. The Toxic Substance Control Act (TSCA) was passed in 1976. It is widely recognized to have been ineffective in protecting children, pregnant women, and the general population from hazardous chemicals in the marketplace. It does not take into account the special vulnerabilities of children in attempting to protect the population from chemical hazards. Its processes are so cumbersome that in its more than 30 years of existence, the TSCA has been used to regulate only 5 chemicals or chemical classes of the tens of thousands of chemicals that are in commerce. Under the TSCA, chemical companies have no responsibility to perform premarket testing or postmarket follow-up of the products that they produce; in fact, the TSCA contains disincentives for the companies to produce such data. Voluntary programs have been inadequate in resolving problems. Therefore, chemical-management policy needs to be rewritten in the United States. Manufacturers must be responsible for developing information about chemicals before marketing. The US Environmental Protection Agency must have the authority to demand additional safety data about a chemical and to limit or stop the marketing of a chemical when there is a high degree of suspicion that the chemical might be harmful to children, pregnant women, or other populations.

### **Organic Foods: Health and Environmental Advantages and Disadvantages**

10/22/12

The US market for organic foods has grown from \$3.5 billion in 1996 to \$28.6 billion in 2010, according to the Organic Trade Association. Organic products are now sold in specialty stores and conventional supermarkets. Organic products contain numerous marketing claims and terms, only some of which are standardized and regulated.

In terms of health advantages, organic diets have been convincingly demonstrated to expose consumers to fewer pesticides associated with human disease. Organic farming has been demonstrated to have less environmental impact than conventional approaches. However, current evidence does not support any meaningful nutritional benefits or deficits from eating organic compared with conventionally grown foods, and there are no well-powered human studies that directly demonstrate health benefits or disease protection as a result of consuming an organic diet. Studies also have not demonstrated any

detrimental or disease-promoting effects from an organic diet. Although organic foods regularly command a significant price premium, well-designed farming studies demonstrate that costs can be competitive and yields comparable to those of conventional farming techniques. Pediatricians should incorporate this evidence when discussing the health and environmental impact of organic foods and organic farming while continuing to encourage all patients and their families to attain optimal nutrition and dietary variety consistent with the US Department of Agriculture's MyPlate recommendations.

This clinical report reviews the health and environmental issues related to organic food production and consumption. It defines the term "organic," reviews organic food-labeling standards, describes organic and conventional farming practices, and explores the cost and environmental implications of organic production techniques. It examines the evidence available on nutritional quality and production contaminants in conventionally produced and organic foods. Finally, this report provides guidance for pediatricians to assist them in advising their patients regarding organic and conventionally produced food choices.

## **Pesticide Exposure in Children**

12/2012

This statement presents the position of the American Academy of Pediatrics on pesticides. Pesticides are a collective term for chemicals intended to kill unwanted insects, plants, molds, and rodents. Children encounter pesticides daily and have unique susceptibilities to their potential toxicity. Acute poisoning risks are clear, and understanding of chronic health implications from both acute and chronic exposure are emerging. Epidemiologic evidence demonstrates associations between early life exposure to pesticides and pediatric cancers, decreased cognitive function, and behavioral problems. Related animal toxicology studies provide supportive biological plausibility for these findings. Recognizing and reducing problematic exposures will require attention to current inadequacies in medical training, public health tracking, and regulatory action on pesticides. Ongoing research describing toxicologic vulnerabilities and exposure factors across the life span are needed to inform regulatory needs and appropriate interventions. Policies that promote integrated pest management, comprehensive pesticide labeling, and marketing practices that incorporate child health considerations will enhance safe use.

# American Congress of Obstetricians and Gynecologists

## Joint ACOG, ASRM, AAP, SMFM letter to U.S. Congress on TSCA Reform

February 12, 2014

The Honorable Fred Upton  
Chair, Energy and Commerce Committee  
U.S. House of Representatives  
Washington, DC 20510

The Honorable John Shimkus  
Chair, Environment and the Economy  
Subcommittee  
U.S. House of Representatives  
Washington, DC 20510

The Honorable Henry Waxman  
Ranking Member, Energy and Commerce  
Committee  
U.S. House of Representatives  
Washington, DC 20510

The Honorable Paul Tonko  
Ranking Member, Environment and the  
Economy  
Subcommittee  
U.S. House of Representatives  
Washington, DC 20510

Dear Chairman Shimkus and Ranking Member Tonko,

The American Congress of Obstetricians and Gynecologists (ACOG), the American Society for Reproductive Medicine (ASRM), the American Academy of Pediatrics (AAP), and the Society for Maternal-Fetal Medicine (SMFM) thank you for your leadership in elevating the issue of toxic chemical reform. Together our organizations represent nearly 120,000 physicians and partners dedicated to the health of vulnerable populations such as pregnant women, infants, and children. We appreciate your commitment to enacting meaningful chemical safety legislation.

We are taking this opportunity to provide you with our comments on reform of the Toxic Substances Control Act (TSCA).

As practitioners of women's and children's health, we are consistently seeking ways to advance the health of our patients and to improve outcomes. We know that an important outcome of pregnancy is no longer just a healthy newborn, but a human being optimally programmed for health from infancy through old age. Pregnant women's exposure to harmful chemicals can cross the placenta, and in some cases can accumulate in the fetus, resulting in higher fetal than maternal exposure. Robust scientific evidence has emerged over the past several years demonstrating that preconception and prenatal environmental exposures can have a profound and lasting impact on reproductive health across the life course. In addition, as infants and children grow and mature, their unique physiologic, developmental and behavioral differences make them especially vulnerable to chemical exposures during critical windows of development. It is with these concerns in mind that we share our recommendations to reform TSCA.

Any reform proposal should include:

- An adequate definition of "vulnerable populations," as is found in the definition of "vulnerable human population" in the Safe Chemicals Act (S 696) including, at minimum, pregnant women, infants, and children;
- A requirement that subpopulations, once defined, are protected from aggregate exposure to high priority chemicals;

- A health-based standard of “a reasonable certainty of no harm to vulnerable populations;”
- A requirement of the EPA and industry to estimate the cost of dealing with the health care consequences, including neurodevelopmental and immunological damage, of chemical exposures;
- Initiation of a public awareness and prevention campaign, to address the enormous public health implications of these exposures;
- Support of additional scientific investigation into the causes and prevention of birth defects, including linkages between environmental hazards and adverse reproductive and developmental outcomes; and
- Establishment of appropriate deadlines and timetables for EPA to complete a minimum number of safety assessments and determinations. The history of environmental laws is that they achieve their best results with clear and definite deadlines.

Congress has an opportunity to enact truly meaningful preventative and protective chemical safety legislation. We hope that careful consideration will be given to our recommendations, and that the health of vulnerable populations will be a main focus of reform. We look forward to working with you to bring the best TSCA-reform proposal forward and hope that you will see us as a resource moving forward.

Sincerely,

Jeanne A. Conry, MD, PhD, FACOG  
President  
American Congress of Obstetricians and  
Gynecologists

Rebecca Z. Sokol, MD, MPH  
Acting President  
American Society for Reproductive Medicine

James M. Perrin, MD, FAAP  
President  
American Academy of Pediatrics

Vincenzo Berghella, MD  
President  
Society for Maternal-Fetal Medicine

## **Exposure to Toxic Environmental Agents ([Committee Opinion](#) and [White Paper](#))**

Reducing exposure to toxic environmental agents is a critical area of intervention for obstetricians, gynecologists, and other reproductive health care professionals. Patient exposure to toxic environmental chemicals and other stressors is ubiquitous, and preconception and prenatal exposure to toxic environmental agents can have a profound and lasting effect on reproductive health across the life course. Prenatal exposure to certain chemicals has been documented to increase the risk of cancer in childhood; adult male exposure to pesticides is linked to altered semen quality, sterility, and prostate cancer; and postnatal exposure to some pesticides can interfere with all developmental stages of reproductive function in adult females, including puberty, menstruation and ovulation, fertility and fecundity, and menopause. Many environmental factors harmful to reproductive health disproportionately affect vulnerable and underserved populations, which leaves some populations, including underserved women, more vulnerable to adverse reproductive health effects than other populations. The evidence that links exposure to toxic environmental agents and adverse reproductive and developmental health outcomes is sufficiently robust, and the American College of Obstetricians and Gynecologists and the American Society for Reproductive Medicine join leading scientists and other clinical practitioners in calling for timely action to identify and reduce exposure to toxic environmental agents while addressing the consequences of such exposure.



## Regulation of Methyl Iodide as a Fumigant in California



THE AMERICAN CONGRESS  
OF OBSTETRICIANS  
AND GYNECOLOGISTS

## The American Congress of Obstetricians and Gynecologists

### District IX California

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#### EXECUTIVE DIRECTOR

Margaret Merritt

1400 K Street, Suite 212  
Sacramento, CA 95814  
PHONE: (916) 446-ACOG (2264)  
FAX: (916) 446-2254  
EMAIL: District9@ca.acog.org  
www.acog.org/goto/districtix

February 17, 2011

Kamala Harris  
Attorney General – State of California  
1300 I Street, Suite 1740  
Sacramento CA 95814

RE: Regulation of Methyl Iodide as a Fumigant in California

Dear Ms. Harris:

The American Congress of Obstetricians and Gynecologists (ACOG), District IX (California), represents more than 5,200 physicians dedicated to the health care of California's women. We are writing in response to the Notice of Final Decision to Register Pesticide Products Containing Methyl Iodide on December 1, 2010 by the California Department of Pesticide Regulation, promulgated against the advice of its own scientists, to register the industrial chemical methyl iodide as a new pesticide in California. It is our understanding that a suit has been filed to challenge the regulations. As Attorney General, you will have the opportunity to respond to this suit. Before you respond on the People's behalf, we would like to bring our concerns to your attention.

Methyl iodide is injected into the soil at very high concentrations (up to 125 pounds per acre) prior to planting crops, and will be used in California as a methyl bromide replacement for strawberry production. If registered, its use will be concentrated in the Central Coast and South Coast areas, exposing farm workers and those living close to fields to significant risk.

Consider that New York and Washington states have refused to register this pesticide.

#### Potential Harms:

- Methyl Iodide is a known carcinogen (Proposition 65 list) under controlled lab conditions
- Case studies of inadvertent exposure show that Methyl Iodide is clearly neurotoxic
- The Scientific Review Committee concluded that "were it to be studied appropriately, (Methyl Iodide) would prove to be a potent developmental neurotoxin at exposures well below those required for overt signs of acute exposure (e.g., abnormal physical movements)."

- Methyl Iodide concentrates in the fetal brain at levels higher than the exposed mother in animal studies
- Significant potential for fetal death exists
- Risk assessment is inadequate due to lack of sufficient data and gaps regarding potential neurologic and developmental toxicity
- Data on the environmental fate of Methyl Iodide under all weather conditions is inadequate
- Data on the mechanisms of action of Methyl Iodide is incomplete
- Adverse impacts on public health are expected because of large numbers of exposures-not only workers, but residents, school children, and potentially people driving through the area
- Bioassays in mouse studies were not conducted long enough to accurately estimate cancer risk
- No robust studies of neurotoxicity have been conducted
- Significant potential for ground water contamination exists

ACOG is concerned with the impact of environmental toxins and their effect on reproductive health. We are troubled by information that indicates more potential for harm than previously thought. Because data are lacking on the safety of most chemicals, careful consideration of the risks posed must be given while the potential immediate and long term health and genetic risks are evaluated.

The University of California San Francisco has taken the lead on alerting the scientific community to potential dangers of environmental toxins. In fact, they have a program dedicated to the issue – the Program for Reproductive Health and the Environment (PRHE). They are bringing scientific rigor to the field of environmental science. Currently, there is no requirement that industry provide research regarding the safety of chemicals prior to approval. There is no requirement for double-blind clinical trials as are used with the pharmaceutical approval process. PRHE is bringing the science to decision makers so that decisions can be made with the best available information.

Research in the field of chemical exposure is hampered by a number of confounding factors, which interfere with the understanding or interpretation of cause and effect. Studies rely on exposure recall, and encounter varying effects depending on dose, other chemical exposures, a person's stage of development and life, and unique genetic susceptibility. The fetus, infants and children are most susceptible to harm because of their underdeveloped organ systems and developing immune systems. There are animal studies and laboratory modeling studies which support the serious concerns listed above. While evidence is being accumulated, the potential for harm – irreversible long lasting harm which can be passed from parent to child to grandchild – is so great, that we must make a decision based on current information and that supports our basic tenet in medicine: First do no harm. We urge you to follow the Precautionary Principle of Environmental Toxin Research: a chemical should NEVER be released if there is concern about its impact on health; we must exert caution when it comes to health risks and exposure. This Precautionary Principle needs to be at the forefront of Environmental Toxin Public Policy decision-making.

Since Methyl Iodine is virtually impossible to contain when released in the environment, we must have significant evidence that it is safe.

It may help to weigh the potential harm versus alternatives.

**Alternatives:**

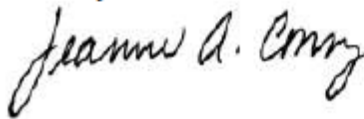
There are many fumigant-free farming methods that have been shown to be effective against soil pests.

- Steam sterilization
- Crop rotation
- Solarization
- Microbial pesticides which target soil pathogens or nematodes
- Green manures like mustard or broccoli tilled into the soil
- Anaerobic soil disinfestation
- Use of disease-resistant cultivars
- Alternative substrate cultivation

As our new Attorney General who has a record and passion for fighting for women, reproductive health, disadvantaged low-income people (who will be disproportionately affected by these agricultural exposures), we urge you to *not* accept the status quo and *not* support the Department of Pesticide Regulation decision. We urge that further study be conducted to determine the safety of this fumigant before allowing its registration.

We appreciate your consideration. Please let us know if we can provide any further information or assistance concerning this issue.

Sincerely,



Jeanne Conry, MD, FACOG, Ph.D.  
Chair, District IX

cc: Jerry Brown, Governor, State of California  
Diana Dooley, HHS Secretary  
Terri Thorfinnson, Office of Women's Health  
Leslie Kowalewski, March of Dimes  
Linda Giudice, MD – UCSF, Program for Reproductive Health and the Environment

## Comment on Petition to Suspend and Cancel All Registrations for the Soil Fumigant Iodomethane (Methyl Iodide)



### The American Congress of Obstetricians and Gynecologists

#### District IX California

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**JR. FELLOW CHAIR**

David Finke, MD

**EXECUTIVE DIRECTOR**

Margaret Merritt

May 13, 2011

ATTN: Office of Pesticide Programs (OPP)  
OPP Regulatory Public Docket (7502P),  
Environmental Protection Agency,  
1200 Pennsylvania Ave., NW.,  
Washington, DC 20460-0001.

RE: Docket # EPA-HQ-OPP-2010-0541

Comment on Petition to Suspend and Cancel All Registrations for the Soil Fumigant Iodomethane (Methyl Iodide)

To the EPA Office of Pesticide Programs:

The American Congress of Obstetricians and Gynecologists (ACOG), District IX (California), represents more than 5,300 physicians dedicated to the health care of California's women. We are writing to comment on the petition to the United States Environmental Protection Agency (EPA) to exercise its authority under Section 6 of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), 7 U.S.C. § 136d, to suspend and cancel all registrations for the pesticide pending reconsideration of the science. Methyl iodide is a known carcinogen, a neurotoxin, and a thyroid toxicant than can disrupt fetal development and cause miscarriages. Because of the imminent threat to men, women, and children we would like to bring our concerns to your attention.

Methyl iodide is injected into the soil at very high concentrations (up to 125 pounds per acre) prior to planting crops, and will be used in California as a methyl bromide replacement for strawberry production. If registered, its use will be concentrated in the Central Coast and South Coast areas, exposing farm workers and those living close to fields to significant risk.

**Consider that New York and Washington states have refused to register this pesticide.**

**Potential Harms:**

- Methyl Iodide is a known carcinogen (Proposition 65 list) under controlled lab conditions
- Case studies of inadvertent exposure show that Methyl Iodide is clearly neurotoxic
- The Scientific Review Committee at the California Department of Pesticide Regulation concluded that "were it to be studied appropriately, (Methyl Iodide) would prove to be a potent

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developmental neurotoxin at exposures well below those required for overt signs of acute exposure (e.g., abnormal physical movements).”

- Methyl Iodide concentrates in the fetal brain at levels higher than the exposed mother in animal studies
- Significant potential for fetal death exists
- Risk assessment is inadequate due to lack of sufficient data and gaps regarding potential neurologic and developmental toxicity
- Data on the environmental fate of Methyl Iodide under all weather conditions is inadequate
- Data on the mechanisms of action of Methyl Iodide is incomplete
- Adverse impacts on public health are expected because of large numbers of exposures-not only workers, but residents, school children, and potentially people driving through the area
- Bioassays in mouse studies were not conducted long enough to accurately estimate cancer risk
- No robust studies of neurotoxicity have been conducted
- Significant potential for ground water contamination exists

ACOG is concerned with the impact of environmental toxins and their effect on reproductive health. We are troubled by information that indicates more potential for harm than previously thought. Because data are lacking on the safety of most chemicals, careful consideration of the risks posed must be given while the potential immediate and long term health and genetic risks are evaluated.

Currently, there is no requirement that industry provide research regarding the safety of chemicals prior to approval. There is no requirement for double-blind clinical trials as are used with the pharmaceutical approval process. Research in the field of chemical exposure is hampered by a number of confounding factors, which interfere with the understanding or interpretation of cause and effect. Studies rely on exposure recall, and encounter varying effects depending on dose, other chemical exposures, a person's stage of development and life, and unique genetic susceptibility. The fetus, infants and children are most susceptible to harm because of their underdeveloped organ systems and developing immune systems.

There are animal studies and laboratory modeling studies which support the serious concerns listed above. While evidence is being accumulated, the potential for harm – irreversible long lasting harm which can be passed from parent to child to grandchild – is so great, that we must make a decision based on current information and that supports our basic tenet in medicine: First do no harm. We urge you to follow the Precautionary Principle of Environmental Toxin Research: a chemical should NEVER be released if there is concern about its impact on health; we must exert caution when it comes to health risks and exposure. This Precautionary Principle needs to be at the forefront of Environmental Toxin Public Policy decision-making.

Since Methyl Iodine is virtually impossible to contain when released in the environment, we must have significant evidence that it is safe.

It may help to weigh the potential harm versus alternatives.

**Alternatives:**

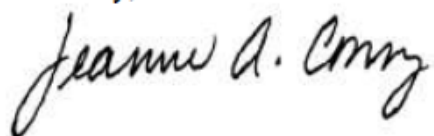
There are many fumigant-free farming methods that have been shown to be effective against soil pests.

- Steam sterilization
- Crop rotation
- Solarization
- Microbial pesticides which target soil pathogens or nematodes
- Green manures like mustard or broccoli tilled into the soil
- Anaerobic soil disinfestation
- Use of disease-resistant cultivars
- Alternative substrate cultivation

The science surrounding the toxicity of methyl iodide has grown significantly over the past few years and underscores the dangerous nature of pesticide. This fumigant possesses significant harms to public health that cannot be mitigated through limitation on exposures. Additionally, none of the EPA's calculations account for the extra vulnerability of the unborn fetus and children to toxic insults. We know that developing organisms are generally more sensitive to these toxicants than adults, yet no additional safety factors were applied to account for this sensitivity. We urge you to do whatever is possible to prevent this chemical from being registered pesticide.

**We appreciate your consideration.** Please let us know if we can provide any further information or assistance concerning this issue.

Sincerely,

A handwritten signature in black ink that reads "Jeanne A. Conry". The signature is written in a cursive, flowing style.

Jeanne Conry, MD, FACOG, Ph.D.  
Chair, District IX

cc: Jerry Brown, Governor, State of California  
Diana Dooley, HHS Secretary  
Terri Thorfinnson, Office of Women's Health  
Dr. Hal Lawrence, CEO, American Congress of Obstetricians & Gynecologists  
Leslie Kowalewski, March of Dimes  
Linda Giudice, MD – UCSF, Program for Reproductive Health and the Environment

## Comments on: Chlorpyrifos Registration Review; Preliminary Human Health Risk

**ACOG**

THE AMERICAN CONGRESS  
OF OBSTETRICIANS  
AND GYNECOLOGISTS

### Office of the President

James N. Martin, Jr., MD, FACOG  
2500 North State Street  
Jackson, MS 39216

October 3, 2011

Mr. Tom Myers  
Pesticide Re-evaluation Division  
Office of Pesticide Programs, Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460-0001  
telephone number: (703) 308-8589  
e-mail address: [myers.tom@epa.gov](mailto:myers.tom@epa.gov).

**Re: Chlorpyrifos Registration Review; Preliminary Human Health Risk  
Assessment Docket Number: EPA-HQ-OPP-2008-0850**

Dear Mr. Myers:

The American College of Obstetricians and Gynecologists (the College) represents over 56,000 physicians and partners in women's health, comprising almost 95% of board-certified practicing obstetrician-gynecologists in the U.S. We share the concerns expressed by the American Academy of Pediatrics and many other colleague organizations regarding the risks posed by pesticides and other environmental chemicals on pregnant women and their babies. We urge the US Environmental Protective Agency to take all necessary actions when reviewing substances to guarantee the health and safety of America's mothers and babies.

In docket number [EPA-HQ-OPP-2008-0850](#), [[Federal Register Notice](#), August 24, 2011 and [Federal Register Notice](#), July 6, 2011], the Environmental Protection Agency is inviting comments regarding its upcoming decision to re-register the pesticide chlorpyrifos, an organophosphate (OP) insecticide, acaridicide, and miticide used to control a variety of insects. ACOG is pleased to offer its comments for the EPA's consideration.

In 2007, a Summit on Environmental Challenges to Reproductive Health and Fertility was convened, bringing together more than 400 scientists, researchers, and health care professionals to discuss current knowledge of, and concerns about, the effects of environmental contaminants on reproductive health and fertility. Chlorpyrifos was one of many contaminant sources discussed at this event. ACOG refers you to the summary proceedings of this Summit, found at Fertility and Sterility, Volume 89, No. 2, February 2008, the journal of the American Society for Reproductive Medicine.

ACOG also brings to your attention compelling evidence of links between prenatal exposure to chlorpyrifos and negative neurobehavioral and neurodevelopmental outcomes in neonates, infants, and young children. These recent studies are summarized in the US EPA June 30, 2011 Memo Chlorpyrifos: Preliminary Human Health Risk Assessment for Registration Review.

ACOG fully supports rigorous scientific investigation into the causes and prevention of birth defects, including linkages between environmental hazards and adverse reproductive and developmental health outcomes. When substances are found to harm babies through the mother's exposure, timely and effective steps must be taken to ensure the safety of all mothers and babies.

ACOG supports action taken in 2000 to largely eliminate use of chlorpyrifos in home and school settings. We strongly urge the EPA to consider the large body of evidence now before it in its decision on allowing continued use of this agent. The health and safety of America's mothers and babies must be our collective paramount concern.

Sincerely,

A handwritten signature in black ink, appearing to read 'James N. Martin, Jr.', with a large, stylized flourish at the end.

James N. Martin, Jr., MD, FACOG  
President

## Letter of Support for the Safe Chemicals Act

The Honorable Frank R. Lautenberg 141 Hart Senate Office Building  
Washington, DC 20510

Dear Senator Lautenberg,

The American Congress of Obstetricians and Gynecologists (ACOG), representing 57,000 ob-gyns and partners in women's health, offers our strong support for your legislation, the Safe Chemicals Act, as well as comments that would further strengthen the bill in protecting the health of pregnant women, children, and fetuses.

The Safe Chemicals Act would modernize the Toxic Substances Control Act in ways which may dramatically improve the health of pregnant women and babies, leading to multi-generational health improvement. The bill directs the US Environmental Protection Agency (USEPA) to prioritize its work based on risk. It requires the USEPA to consider the effect or potential effect of chemical exposures on reproduction, growth and development, the brain or nervous system, and other biological functions when determining a chemical's "toxicological property." It further, and very importantly, directs the USEPA to place a priority on actions designed to safeguard infants, children, adolescents, and pregnant women, considered "vulnerable human populations" in the legislation.

Scientific knowledge in the field of environmental and toxicant exposure has improved significantly



over recent years. Today, we know that expert obstetrical care, from preconception to delivery, can only do so much to ensure healthy birth outcomes. Chemicals that affect fetal programming and placental stem cells, the point at which significant damage can occur, may lead to multi-generational health care issues across the lifespan.

We urge you and other policy leaders to consider taking additional steps to protect pregnant women and fetuses, including:

- Requiring the USEPA and industry to estimate the cost of dealing with the health care consequences, including neurodevelopmental and immunological damage, of chemical exposures, and
- A public awareness and prevention campaign, to address the enormous public health implications of these exposures.

Thank you, Senator, for your long-standing commitment and leadership on this critically important issue. We support your legislation and hope you'll be sure to contact me or Lucia DiVenere, ACOG's Senior Director of Government Affairs at [ldivenere@acog.org](mailto:ldivenere@acog.org), if you have any questions or if we can be of any assistance.

Sincerely,

James T. Breedon, MD, FACOG  
President

## **American Medical Association**

### **Policy D-135.976 Modernization of the Federal Toxic Substances Control Act (TSCA) of 1976**

2013

Our AMA will: (1) collaborate with relevant stakeholders to advocate for modernizing the Toxic Substances Control Act (TSCA) to require chemical manufacturers to provide adequate safety information on all chemicals and give federal regulatory agencies reasonable authority to regulate hazardous chemicals in order to protect the health of all individuals, especially vulnerable populations; (2) support the public disclosure of chemical use, exposure and hazard data in forms that are appropriate for use by medical practitioners, workers, and the public; and (3) work with members of the Federation to promote a reformed TSCA that is consistent with goals of Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH). (Res. 515, A-12)

### **Reproductive Health Outcomes and Development in EPA Environmental Justice Policy**

10/10/2011

RESOLVED, That our American Medical Association lobby Congress to support ongoing initiatives that include reproductive health outcomes and development particularly in minority populations in Environmental Protection Agency Environmental Justice policies. (Directive to Take Action)

Fiscal Note: Modest - between \$1,000 - \$5,000.

### **Sustainable Food**

2009

Our AMA: (1) supports practices and policies in medical schools, hospitals, and other health care facilities that support and model a healthy and ecologically sustainable food system, which provides food and beverages of naturally high nutritional quality; (2) encourages the development of a healthier food system through the US Farm Bill and other federal legislation; and (3) will consider working with other health care and public health organizations to educate the health care community and the public about the importance of healthy and ecologically sustainable food systems. (CSAPH Rep. 8, A-09)

### **Human and Environmental Health Impacts of Chlorinated Chemicals**

2008

The AMA: (1) encourages the Environmental Protection Agency to base its evaluations of the potential public health and environmental risks posed by exposure to an individual chlorinated organic compound, other industrial compound, or manufacturing process on reliable data specific to that compound or process; (2) encourages the chemical industry to increase knowledge of the environmental behavior, bioaccumulation potential, and toxicology of their products and by-products; and (3) supports

the implementation of risk reduction practices by the chemical and manufacturing industries. (Sub. Res. 503, A-94; Reaffirmation I-98; Reaffirmed: CSAPH Rep. 2, A-08)

## **Stewardship of the Environment**

2010

The AMA: (1) encourages physicians to be spokespersons for environmental stewardship, including the discussion of these issues when appropriate with patients; (2) encourages the medical community to cooperate in reducing or recycling waste; (3) encourages physicians and the rest of the medical community to dispose of its medical waste in a safe and properly prescribed manner; (4) supports enhancing the role of physicians and other scientists in environmental education; (5) endorses legislation such as the National Environmental Education Act to increase public understanding of environmental degradation and its prevention; (6) encourages research efforts at ascertaining the physiological and psychological effects of abrupt as well as chronic environmental changes; (7) encourages international exchange of information relating to environmental degradation and the adverse human health effects resulting from environmental degradation; (8) encourages and helps support physicians who participate actively in international planning and development conventions associated with improving the environment; (9) encourages educational programs for worldwide family planning and control of population growth; (10) encourages research and development programs for safer, more effective, and less expensive means of preventing unwanted pregnancy; (11) encourages programs to prevent or reduce the human and environmental health impact from global climate change and environmental degradation. (12) encourages economic development programs for all nations that will be sustainable and yet nondestructive to the environment; (13) encourages physicians and environmental scientists in the United States to continue to incorporate concerns for human health into current environmental research and public policy initiatives; (14) encourages physician educators in medical schools, residency programs, and continuing medical education sessions to devote more attention to environmental health issues; (15) will strengthen its liaison with appropriate environmental health agencies, including the National Institute of Environmental Health Sciences (NIEHS); (16) encourages expanded funding for environmental research by the federal government; and (17) encourages family planning through national and international support. (CSA Rep. G, I-89; Amended: CLRPD Rep. D, I-92; Amended: CSA Rep. 8, A-03; Reaffirmed in lieu of Res. 417, A-04; Reaffirmed in lieu of Res. 402, A-10)

## **Cancer Risk of Pesticides in Agricultural Workers**

2006

The AMA: (1) urges the EPA and other responsible state and federal regulatory agencies to continue their efforts at safeguarding human and environmental health, and especially the health of agricultural workers who may be exposed to pesticides; (2) urges physicians to utilize the resources of local or regional poison control centers or the National Pesticide Information Center for the composition and toxicity of specific pesticides; and (3) through its scientific journals and publications, supports alerting physicians to the potential hazards of agricultural pesticides. (CSA Rep. B, I-87; Reaffirmed by CSA Rep. 4 - I-94; Reaffirmation I-96; Reaffirmed and Modified: CSAPH Rep. 3, A-06)

## **Modern Chemicals Policies**

2010

Our AMA supports: (1) the restructuring of the Toxic Substances Control Act to serve as a vehicle to help federal and state agencies to assess efficiently the human and environmental health hazards of industrial chemicals and reduce the use of those of greatest concern; and (2) the Strategic Approach to International Chemicals (SAICM) process leading to the sound management of chemicals throughout their life-cycle so that, by 2020, chemicals are used and produced in ways that minimize adverse effects on human health and the environment. (Sub. Res. 404, A-08; Reaffirmation A-10)

Our AMA: (1) will call upon the United States government to implement a national modern, comprehensive chemicals policy that is in line with current scientific knowledge on human and environmental health, and that requires a full evaluation of the health impacts of both newly developed and industrial chemicals now in use; and (2) encourages the training of medical students, physicians, and other health professionals about the human health effects of toxic chemical exposures. (Sub. Res. 404, A-08; Reaffirmation A-10)

## Modernizing Chemical Policies to Improve Public Health

2009

**Be it resolved:** That the AMA encourage the training of medical students about the health effects of toxic exposures on patients; and that be it

**Resolved:** That the AMA calls upon Congress to craft and implement a modern, comprehensive chemicals policy, to (1) Close the *Data Gap* by improving the efficiency of the chemicals market by implementing measures that improve the flow of information regarding toxicity from chemical producers to businesses, consumers, workers, and government agencies; (2) Close the *Safety Gap* by reducing the commercial circulation of the most hazardous chemicals by identifying those of greatest concern and implementing measures that motivate businesses to reduce their usage and improve the safety of their usage of these substances through toxics use reduction and other relevant strategies; and (3) Close the *Technology Gap* by introducing a range of other incentives to encourage businesses to invest in green chemistry innovation, and by supporting "green" chemistry research and education, and be it

**Resolved** that the AMA carry this resolution to the World Medical Association urging involvement in the SAICM process leading to the sound management of chemicals throughout their life-cycle so that, by 2020, chemicals are used and produced in ways that minimize adverse effects on human health and the environment.

## Clean Air

2009

Our AMA supports cooperative efforts with the Administration, Congress, national, state and local medical societies, and other organizations to achieve a comprehensive national policy and program to address the adverse health effects from environmental pollution factors, including air and water pollution, toxic substances, the "greenhouse effect," stratospheric ozone depletion and other contaminants. (Sub. Res. 43, A-89; Reaffirmed: Sunset Report, A-00; Reaffirmation I-06; Reaffirmation I-07; Reaffirmed in lieu of Res. 507, A-09; Reaffirmed in lieu of Res. 509, A-09)

## **Research into the Environmental Contributors to Disease**

2003

Our AMA will (1) advocate for greater public and private funding for research into the environmental causes of disease, and urge the National Academy of Sciences to undertake an authoritative analysis of environmental causes of disease; and (2) ask the steering committee of the Medicine and Public Health Initiative Coalition to consider environmental contributors to disease as a priority public health issue. (Res. 402, A-03)

## **Contamination of Drinking Water by Pharmaceuticals and Personal Care Products**

2006

Our AMA will: (1) request that the Environmental Protection Agency conduct studies to understand better the public health impact of discarded pharmaceuticals and personal care products on the nation's drinking water supplies; and (2) encourage the EPA and other federal agencies to engage relevant stakeholders, which may include, but is not limited to the AMA, pharmaceutical companies, pharmaceutical retailers, state and specialty societies, and public health organizations in the development of guidelines for physicians and the public for the proper disposal of pharmaceuticals and personal care products to prevent contamination of drinking water systems. (Res. 403, A-06)

## **Regulation of Endocrine Disrupting Chemicals**

2009

Our American Medical Association will work with the federal government to pursue the following tenets:

- (1) Regulatory oversight of endocrine disrupting chemicals should be centralized such that regulations pass through a single office to ensure coordination among agencies, with the exception of pharmaceutical agents that are regulated by the Food and Drug Administration and are used for medical purposes
- (2) Policy should be based on comprehensive data covering both low-level and high-level exposures
- (3) Policy should be developed and revised under the direction of a collaborative group comprising endocrinologists, toxicologists, occupational/environmental medicine specialists, epidemiologists, and policymakers (Res. 906, I-09)

## **Antimicrobial Use and Resistance**

2001

Our AMA is opposed to the use of antimicrobials at non-therapeutic levels in agriculture, or as pesticides or growth promoters, and urges that non-therapeutic use in animals of antimicrobials (that are also used in humans) should be terminated or phased out based on scientifically sound risk assessments. (Res. 508, A-01)

## **Effects of Work on Pregnancy**

2009

Our AMA: (1) supports the right of employees to work in safe workplaces that do not endanger their reproductive health or that of their unborn children; (2) supports workplace policies that minimize the risk of excessive exposure to toxins with known reproductive hazards irrespective of gender or age; (3) encourages physicians to consider the potential benefits and risks of occupational activities and exposures on an individual basis and work with patients and employers to define a healthy working environment for pregnant women; (4) encourages employers to accommodate women's increased physical requirements during pregnancy; recommended accommodations include varied work positions, adequate rest and meal breaks, access to regular hydration, and minimizing heavy lifting; and (5) acknowledges that future research done by interdisciplinary study groups composed of obstetricians/gynecologists, occupational medicine specialists, pediatricians, and representatives from industry can best identify adverse reproductive exposures and appropriate accommodations. (CSA Rep. 9, A-99; Reaffirmed: CSAPH Rep. 1, A-09)

## **Human and Environmental Health Impacts of Chlorinated Chemicals**

2008

The AMA: (1) encourages the Environmental Protection Agency to base its evaluations of the potential public health and environmental risks posed by exposure to an individual chlorinated organic compound, other industrial compound, or manufacturing process on reliable data specific to that compound or process; (2) encourages the chemical industry to increase knowledge of the environmental behavior, bioaccumulation potential, and toxicology of their products and by-products; and (3) supports the implementation of risk reduction practices by the chemical and manufacturing industries. (Sub. Res. 503, A-94; Reaffirmation I-98)

## American Nurses Association

### Nursing Practice, Chemical Exposure and Right-to-Know

2006

RESOLVED that the American Nurses Association advocates a course of action both nationally and globally and through the nationwide state legislative agenda that reduces the use of toxic chemicals requiring that less harmful chemicals be substituted whenever possible; supports labeling and full disclosure mechanisms; demands adequate information on the health effects of chemicals and chemicals in products before they are introduced on the market; creates more streamlined methods for chemicals to be removed from use; and, be it further

RESOLVED, that the American Nurses Association monitors national policies on chemical issues and meet with legislators informing them of what nurses and the nursing profession believe concerning the links between chemical exposures, a healthy environment and the public's health; and be it further

RESOLVED, that the American Nurses Association supports research efforts in environmental health to better understand the relationship between health and the environment, especially in the area of toxicology and in vulnerable populations such as infants, children, pregnant women, and the elderly, looking at interactions when more than one chemical exposure occurs; and be it further

RESOLVED, that the American Nurses Association advances an enhanced organizational initiative to educate nurses about the potentially harmful chemicals that are typically used in health care settings including currently available safer products for substitution; and be it further

RESOLVED, that the American Nurses Association advocates the integration of environmental health principles into nursing education, practice, research, advocacy and policy development, and be it further

RESOLVED, that the American Nurses Association endorses efforts to ensure that nurses have full access to information and the right-to-know about the potentially hazardous chemicals to which nurses, other healthcare workers, patients, and communities in general are exposed, and be it further

RESOLVED, that ANA supports industry research that results in the development of safe cosmetics and personal care products.

RESOLVED, that the ANA endorse and sign on to the "National Campaign for Safe Cosmetics" and encourages CMAs to do the same in order to educate nurses and the public to take precautions when using cosmetics and personal care products, and to urge United States cosmetic companies to sign a compact to remove untested chemicals from cosmetics by 2010.

### Healthy Food in Health Care

2008

RESOLVED, that the American Nurses Association supports the development of national and state laws, regulations and policies that specifically reduce the use of rBGH or rBST in milk and dairy production in the United States; and be it further

RESOLVED, that the American Nurses Association shall work collaboratively with other nursing organizations and hospital and healthcare organizations to eliminate purchasing milk and dairy products

for use in the health care industry that contain artificial hormones such as recombinant bovine growth hormone (rBGH) and any other food containing inappropriate additives; and be it further

RESOLVED, that the American Nurses Association shall educate nurses regarding the known and projected harmful effects of the use of food additives, rBGH, and other hormones and antibiotics in milk and dairy production and in agriculture; and be it further

RESOLVED, that the American Nurses Association supports the public's right to know through support of appropriate food labeling, including country-of-origin and genetic modification and of nutritional information for food served in institutions, restaurants and fast food chains: and be it further

RESOLVED, that the American Nurses Association advocates for local, state, national and international laws, regulations and policies that will support local, sustainable agricultural and dairy production practices and reduce the presence of environmental contaminants and additives in all food; and be it further

RESOLVED, that the American Nurses Association encourages health care institutions to institute food preference policies to purchase and serve nutritional foods grown according to organic or other methods that support and emphasize sustainable food purchasing, local food systems, renewable resources, ecological diversity, and fair labor practices; and be it further

RESOLVED, that the American Nurses Association encourages nurses to serve as role models and educators by participating in and promoting nutritious foods from sustainable local food systems so as to improve eating habits, increase patient and public health, and support the long-term social, economic, and environmental well-being of workers, communities and global health; and be it further

RESOLVED, that the American Nurses Association supports Federal legislation to create an efficient and coherent food safety regulatory system in the U.S.

### **Inappropriate Use of Antimicrobials in Agriculture**

2004

RESOLVED, That the American Nurses Association urge Congress, meat and poultry producers, and bulk purchasers of meat to promptly phase out the nontherapeutic use of medically important antibiotics and the use of fluoroquinolones in poultry; and

RESOLVED, That the American Nurses Association educate registered nurses on the non-therapeutic use of antibiotics and fluoroquinolones by the meat and poultry producers and ways in which registered nurses can advocate for a change in this practice; and

RESOLVED, That the American Nurses Association support full disclosure by meat and poultry producers regarding the use of pharmaceuticals.



## **American Public Health Association**

### **Breast Cancer and Occupational Exposure**

11/18/2014

In conjunction with increasing research into the connections between breast cancer and work-related exposures, urges the U.S. surgeon general to declare an association between certain chemicals and breast cancer as well as to emphasize the importance of identifying workplace exposures that contribute to breast cancer. Calls on relevant federal agencies, such as the National Institutes of Health, to direct breast cancer research funds toward the study of occupational exposure and risk. Also urges federal agencies to investigate the prevalence of breast cancer among certain groups of workers and raise awareness about safer chemical alternatives and risk reduction.

### **Diesel exhaust and human health**

11/18/2014

Updating similar APHA policy adopted in 1999, encourages relevant federal, state and local agencies to raise public awareness on the human health dangers of diesel exhaust exposure and engage local stakeholders in lowering diesel emissions as well as work-related exposures. Calls on officials to go beyond the typical means of communication and organize awareness-raising events in partnership with state and local APHA chapters, occupational safety and health groups, environmental organizations, labor unions and industry councils. Also urges advocacy in support of stronger diesel emissions regulations and the development of cleaner, renewable transportation technologies.

### **Regulation of electronic cigarettes**

11/18/2014

Calls on the U.S. Food and Drug Administration to develop regulations that hold e-cigarettes to the same marketing and advertising standards as conventional tobacco cigarettes and calls for the federal funding of research on the short- and long-term health consequences of e-cigarette use. Urges the Consumer Product Safety Commission to require special packaging, including warning labels, on e-cigarette cartridges to help prevent childhood poisoning. Also calls on state and local official to restrict the sale of e-cigarettes to minors as well as the use of e-cigarettes in enclosed public areas and workplaces.

### **Opposition to the Use of Hormone Growth Promoters in Beef and Dairy Cattle Production**

11/10/2009

There is clear evidence that hormones originating outside the body can interfere with our own hormone function. For example, estrogen is classified by the International Agency for Research on Cancer as a group 1 human carcinogen. In 1971, the US Food and Drug Administration (FDA) banned use in pregnant women of diethylstilbestrol or DES (the first synthetic hormone) after scientific studies showed higher cancer risks in their daughters. These “DES daughters,” are at least 40 times more likely than the general population to develop clear cell adenocarcinoma, a rare kind of vaginal and cervical cancer, in their teens or twenties. Experience with DES constitutes some of the earliest and most compelling human evidence that disruption of the human endocrine system occurs from exogenous hormone exposure. In

its first scientific statement issued in June 2009, the Endocrine Society, citing the Precautionary Principle, determined that “Results from animal models, human clinical observations, and epidemiological studies converge to implicate EDCs [endocrine disrupting chemicals] as a significant concern to public health.”, p293 The statement echoes the findings of a 1996 article in American Academy of Pediatrics News that “scientific knowledge about [EDCs’] effects on humans . . . appears sufficient to justify societal approaches to limiting population exposures.”

Fetuses, infants, and children are thought to be more vulnerable to the hormone-disrupting effects of exogenous hormones and hormone-like chemicals. A recent consensus conference reviewed the robust and growing body of science that exposure to environmental chemicals, especially in utero, can disrupt normal hormone function and alter child development, as well as alter fetal programming, adding to the risks for hormone-related cancer and other chronic diseases later in life. Today, many hormone-related chronic diseases are common or on the rise, including breast and prostate cancer, thyroid disease, obesity and diabetes, endometriosis, uterine fibroids, and infertility. Early-stage breast development in young girls appears to be occurring at younger ages today compared with 1991, as indicated by a recent study in Pediatrics.

### **Toward a Healthy, Sustainable Food System**

11/6/2007

In the United States, obesity and diet-related chronic disease rates are escalating, while the public’s health is further threatened by rising antibiotic resistance; chemicals and pathogens contaminating our food, air, soil and water; depletion of natural resources; and climate change. These threats have enormous human, social, and economic costs that are growing, cumulative, and unequally distributed. These issues are all related to food—what we eat and how it is produced. The US industrial food system provides plentiful, relatively inexpensive food, but much of it is unhealthy, and the system is not sustainable. Although most US food consumption occurs within this industrial system, healthier and more sustainable alternatives are increasingly available.

The American Public Health Association (APHA) has long been active on food system issues, as is shown by the large body of relevant policy. Moving toward a healthier and more sustainable food system will involve tackling longstanding challenges and addressing new and evolving demands. This position paper reviews the scientific basis for understanding the US food system and sustainability, identifies specific issues of concern, discusses key related policies and action opportunities, and outlines APHA goals. By uniting multiple food system themes in a single statement, it aims to provide clarity, new emphases, and solid direction, encouraging the APHA to increase its activities and leadership to promote a more sustainable, healthier, and more equitable food system.

### **Helping Preserve Antibiotic Effectiveness by Stimulating Demand for Meats Produced Without Excessive Antibiotics**

11/9/2004

This policy reaffirms APHA Resolution 9908, which concerned "the rapid increase in antibiotic resistance in the United States and worldwide," and which recognized "the complex nature of this problem, including the selective pressure of overuse and misuse of antibiotics in human medicine, [and] the use of subtherapeutic levels of antibiotics in animal feeds." APHA Resolution 9908 urged education and certain public policies to address this problem, including "limiting the use of antibiotics in animal feeds." Since the Food and Drug Administration (FDA) has not yet proposed such regulations, and their final

adoption would likely take several years once proposed -- in light of that Agency's acknowledgement that administrative procedures for removing already-approved drugs from animal feeds typically take from six to twenty years per drug or drug class -- this policy expands on policy #9908 by addressing purchasing practices, specifically the opportunity to reduce overall antibiotic use by stimulating market demand for foodstuffs produced without the use of excessive antibiotics.

Scientific study and analysis subsequent to the 1999 passage of this previous policy confirm and further reinforce the contribution of the overuse of antibiotics in animal agriculture to antibiotic resistance affecting humans. The New England Journal of Medicine in 2001 published an editorial titled "Antimicrobial use in animal feed-- time to stop." In March 2003, the Institute of Medicine report, Microbial Threats to Health, stated that "Clearly, a decrease in antimicrobial use in human medicine alone will have little effect on the current situation. Substantial efforts must be made to decrease inappropriate overuse in animals and agriculture as well." An expert consultation of the World Health Organization concluded in December 2003, "There is clear evidence of the human health consequences due to resistant organisms resulting from non-human usage of antimicrobials. These consequences include infections that would not have otherwise occurred, increased frequency of treatment failures (in some cases death) and increased severity of infections."

Recently, major retail food companies have adopted policies requiring certain meat suppliers to reduce use of medically important antibiotics as growth promoters and/or for nontherapeutic purposes, and providing for a purchase preference for other suppliers that comply with the policy. A growing number of suppliers are able to supply meat, fish, and dairy products produced without routine use of antibiotics.

Denmark, the world's largest exporter of pork, successfully ended nonprescription use of agricultural antibiotics in 1999. The European Union subsequently adopted similar policies for antibiotic growth promoters. In August 2003, the World Health Organization released a report detailing Denmark's success, including a 54 percent decrease in antibiotic use in food animals from 1994 to 2001. In the last four years several large pharmaceutical companies have either eliminated or greatly curtailed their anti-infective research activities. Few additional human antibiotics are now under development. Any new antibiotics are likely to be significantly more expensive; hospitals and health care institutions thus have a substantial interest in ensuring that existing antibiotics remain effective for treating human infections as long as possible.

Therefore, to help assure that existing antibiotics remain effective for treating infections as long as possible, the APHA urges:

1. Increased awareness among health care institutions and public health organizations of the contribution of non-therapeutic agricultural antibiotic use to the problem of antibiotic resistance and the roles large food purchasers can play in reducing such antibiotic use.
2. Bulk purchasers of foodstuffs to adopt procurement policies that encourage and, where feasible, require procurement of meat, fish, and dairy products produced without nontherapeutic use of medically important antibiotics.
3. Education of the public regarding antibiotic resistance due to non-therapeutic agricultural use.

### **Precautionary Moratorium on New Concentrated Animal Feed Operations**

11/18/2003

An estimated 54 percent of U.S. livestock are now concentrated on 5 percent of livestock farms, with the largest of such farms getting larger; and these industrial-scale, concentrated animal feeding operations

(CAFOs) which are, according to Environmental Protection Agency (EPA) criteria, facilities with more than 1,000 beef cattle, 2,500 hogs or 100,000 broiler hens now dominate U.S. livestock and poultry production; and Increased numbers of CAFOs in an area often are associated with declines in local economic and social indicators (e.g., business purchases, infrastructure, property values, population, social cohesion), which undermine the socioeconomic and social foundations of community health, particularly in poor and African American rural communities; and CAFOs generate an estimated 575 billion pounds of animal manure yearly. CAFO generated manure has constituents and byproducts of health concern including heavy metals, antibiotics, pathogen bacteria, nitrogen and phosphorus, as well as dust, mold, bacterial endotoxins and volatile gases; CAFO-generated manure being uneconomical to transport for any distance, it is typically stored in open or covered pits or lagoons and later spread or sprayed untreated on nearby cropland, posing additional risks to public health; and

Manure pathogens capable of causing severe gastrointestinal disease, complications, and sometimes death in humans include *Campylobacter* and *Salmonella* species, as well as *Listeria monocytogenes*, *Helicobacter pylori*, and *E coli* O157:H7, and the protozoa *Cryptosporidium parvum*. Runoff from manure-applied fields can carry human pathogens into surface waters, which often serve as drinking water sources. Epidemiology studies have, in fact, linked several outbreaks involving these pathogens to livestock waste; and Manure land application in excess of the land's absorptive capacity also can lead to excess nitrogen and phosphorus in soil, eutrophication of surface waters and algae overgrowth— including some algae producing human toxins; and The emerging scientific consensus is that antibiotics given to food animals contribute to antibiotic resistance transmitted to humans. Antibiotics, as well as arsenic and other metal compounds, are routinely added to the feeds of concentrated animals absent any diagnosed illness—to promote growth and to compensate for the stress of raising animals under confinement—increasing the risks from antibiotic resistance. These routine, non-therapeutic animal uses account for an estimated 13 million pounds of antibiotics annually, most being identical or very similar to human medicines, as compared to 3 million pounds of antibiotics prescribed for humans. Current APHA Policy (Nos. 9908 and 00-LB-5) registers appropriate concern about agricultural use of these medically-important antibiotics; and An estimated 25–75 percent of feed antibiotics pass unchanged into manure waste, posing additional risks to soil, water and air quality and public health following land application. Pig house dust, in a recent study, was found to contain total antibiotics at a concentration of up to 12.5 mg/kg dust with up to five separate compounds, including tylosin, tetracyclines, sulfamethazine, and chloramphenicol; and

In several states, storage pits or lagoons legally can leak millions of gallons of liquid manure, and often spill or burst. They are frequently sited on floodplains, below the water table or over alluvial aquifers (formations favored as drinking water sources but more easily subject to microbial contamination); and CAFO manure wastes also include organic dust, molds, bacterial endotoxins and manure-generated gases of up to 400 separate volatile compounds, such as ammonia and hydrogen sulfide, many of which are known airway irritants, allergens or respiratory hazards; and

Numerous studies document serious respiratory problems among CAFO workers, including chronic bronchitis and non-allergic asthma in about 25 percent of confinement swine workers. Workers exposed to the potent neurotoxin hydrogen sulfide at levels only slightly higher than those at which its odor becomes detectable (5.0 ppm vs .025 ppm), have been found to have accelerated deterioration of neurobehavioral function; and Scientists convened first by the Centers for Disease Control and Prevention (CDC), and more recently by the University of Iowa and Iowa State University, agree CAFO air emissions may constitute a hazard to public health, in addition to workers' health. The latter report recommends that "precautions should be taken to minimize both specific chemical exposures (hydrogen

sulfide and ammonia) and mixed exposures (including odor) arising from CAFOs. The Environmental Protection Agency and the Agency for Toxic Substances and Disease Registry (ATSDR) have both recommended that ambient exposure limits be set for ammonia and hydrogen sulfide emissions from CAFOs. These recommendations are based on several experimental and epidemiologic studies of non-CAFO populations documenting respiratory symptoms associated with low level exposure to individual chemical components of CAFO air emissions, particularly including ammonia and hydrogen sulfide. Two published, controlled studies of people residing near CAFOs report eye and respiratory symptoms associated with CAFO air emissions exposures "similar to more prevalent and severe symptoms experienced by CAFO workers who are exposed at much higher concentrations of mixed emissions," although it should be acknowledged these studies cannot be construed as certain "proof" that a specific disease(s) among community residents has arisen from a specific chemical, bacteria or aromatic compound in CAFO emissions.

Noting that moratoria on new CAFO construction have been called for by the Michigan State Medical Society, the Canadian Medical Association as well as local boards of health, moratoria generally citing existing scientific evidence for threats to worker health and public health, combined with insufficient data to determine whether in the face of those risks public health is being adequately protected; and Considering APHA's recently passed policy (#200011) encouraging as a precautionary principle--"that public health decisions must often be made in the absence of scientific certainty, or in the absence of perfect information"--action to prevent potential harm to reproductive health, infants and children, even if some cause and effect relationships have not been established with scientific certainty; while noting that children suffer disproportionately from asthma; while fetuses, infants and children are more vulnerable to adverse impacts from bacterial and antimicrobial-resistant infections, as well as from exposure to neurotoxins, all health impacts to which existing science suggests that emissions from CAFOs may contribute; and Considering the health and economic impacts on CAFO workers, as well as evidence, albeit less certain, indicating impacts on children and CFO neighbors from exposure to large concentrations of manure and their subsequent emissions of dust, toxins, microbes, antibiotics and pollutants into air and water.

Therefore, the American Public Health Association hereby: Resolves that APHA urge federal, state and local governments and public health agencies to impose a moratorium on new Concentrated Animal Feed Operations until additional scientific data on the attendant risks to public health have been collected and uncertainties resolved. Resolves that APHA urge federal and state governments to initiate and support research to quantify more precisely the exposures to pollutants in air, water and soil emissions of CAFOs experienced by communities surrounding CAFOs, as well as to investigate the greater vulnerability of infants and children to harm from such pollutants, deriving from either greater exposure or increased toxicity.

### **Addressing the Problem of Bacterial Resistance to Antimicrobial Agents and the Need for Surveillance**

1/1/1999

Recognizing the rapid increase in antibiotic resistance in the United States and worldwide and understanding the complex nature of this problem, including the selective pressure of overuse and misuse of antibiotics in human medicine, the use of subtherapeutic levels of antibiotics in animal feeds, and the rapid global spread of resistant bacteria; and Acknowledging that in the United States, 190 million daily doses of antibiotics are ordered in hospitals with twenty-five to forty-five percent being unnecessary, 145 million courses of antibiotics are prescribed with twenty to fifty percent being

unnecessary, and four million pounds of antimicrobials are used therapeutically in animals (and 16 million pounds are used as growth promoters) with forty to eighty percent being unnecessary; and

Being aware of bacterial resistance to all available antibiotics; and Recognizing that prescriptions are written for upper respiratory tract infections to satisfy patients' demands, although the antibiotics have little or no benefit; and Being aware of the decrease in antibiotic use following educational intervention involving both health professionals and patients; and

Acknowledging the need for local surveillance because of geographic variation in resistance patterns, the inadequacies of the current surveillance systems for antibiotic resistance, and that only \$55,400 of the total \$74 million total dollars for surveillance was available for antimicrobial resistance; and Acknowledging that the restriction of antibiotic use resulted in decrease in the resistance level in certain organisms; and

Recognizing the increase in societal costs because of infections caused by bacteria resistant to antibiotics as indicated by the assessment of the Office of Technology Assessment (citing that antibiotic resistant bacteria generated a minimum cost of \$1.3 billion in the United States in 1992), the costs of increased hospitalization of patients with community acquired resistant bacteria, and a higher attributable mortality associated with infections caused by methicillin resistant *Staphylococcus aureus* (as compared to methicillin sensitive *Staphylococcus aureus*); and

Being aware of the agencies and organizations addressing this problem: the Centers for Disease Control and Prevention's strategy for addressing the antimicrobial resistance threat, the World Health Organization Executive Board's call for increased work against antimicrobial resistance, and the Food and Drug Administration's (FDA's) Advisory Committee on Antibiotic Resistance statement in October 1998, that "Microbial development of resistance to the presently available drug therapies is a public health issue of accelerating importance;" therefore

1. Encourages the education of health professionals about the judicious use of antibiotics through clinical practice guidelines and other educational processes;
2. Encourages the development of educational material for patients to increase their understanding of antibiotic usage;
3. Urges strengthening of state public health departments' surveillance to determine patterns of resistance and to detect increases in resistance in a timely manner through surveillance efforts supported by CDC and to actively disseminate that information to health care providers;
4. Urges the Center of Veterinary Medicine of the FDA to work for regulations eliminating the non-medical use of antibiotics and limiting the use of antibiotics in animal feeds; and
5. Supports the introduction of legislation for additional funding for population studies addressing antibiotic resistance and to improve the surveillance network.

## **[Calling on the US Congress to Restructure the Toxic Substances Control Act of 1976](#)**

11/6/2007

The American Public Health Association (APHA) has established prior policy in the area of chemical safety for workers and the general public. The global scale of industrial chemical production is immense and is expected to grow 4-fold by 2050. The US chemical industry is a critical economic sector that designs, produces, and imports the substances that constitute the material base of society. The US

chemical industry produces or imports a total of 42 billion pounds of chemical substances per day for use in industrial processes and commercial products.

Many of these substances that are useful to society are also known to be hazardous to human biology and ecological systems. Groups of workers have nearly always been the first to suffer harm from chemical exposures. The Toxic Substances Control Act (TSCA) of 1976 (PL 94-469) should be restructured to emphasize the obligation of chemical producers and users to fund epidemiological research of exposed workers by government, labor and industry.

TSCA is the federal statute that is broadly intended to enable regulation of chemicals both before and after they enter commerce. TSCA defines chemicals as those not under jurisdiction of other federal regulatory acts, such as pesticides, cosmetics or other food additives.

Analyses conducted by the National Academy of Sciences, the US General Accounting Office, the Congressional Office of Technology Assessment, Environmental Defense, the US Environmental Protection Agency (EPA), former EPA officials, the US Government Accountability Office, and the University of California have concluded that TSCA has fallen short of its objectives and has not served as an effective vehicle for the public, industry, or government to assess the hazards of chemicals in commerce or control those of greatest concern, and that, as a consequence, the statute has not served to motivate industry investment in cleaner technologies. These analyses point to three overarching “gaps” that have emerged in the US chemical management program as a consequence of TSCA:

1. “Data gap”: TSCA does not require producers to generate and disclose information on chemical hazards to the public, government, or downstream businesses and industries including currently required company reports to the EPA of incidents related to chemicals.
2. “Safety gap”: TSCA requires government to meet an excessively high standard of proof before acting to protect public environmental health, even for well-established chemical hazards.
3. “Technology gap”: the lack of both market and regulatory drivers has dampened investment, research, and education in green chemistry: the design, manufacture, and use of chemicals that are safer for biological and ecological systems.

As a consequence, chemicals are marketed in the United States primarily on the basis of their function, price, and performance, with much less attention to their toxic and ecotoxic properties. These conditions in the chemicals market are reflected in chemistry teaching and research in the United States and have produced an array of problems for workers, the public, ecosystems, government, businesses, and industry that will broaden and deepen in coming years, concomitant with expanding global chemical production. These problems include the projected need for more than 600 new hazardous waste sites each month in the United States leading up to 2033, with estimated cleanup costs of \$250 billion; the appearance of hundreds of industrial chemicals in human tissues and fluids, including those of infants; the development of chronic diseases and premature death among thousands of Americans as a consequence of chemical exposures in the workplace; and disproportionate risks due to chemical exposures among members of minority, immigrant, and low-income communities, both as residents and workers.

Sweeping changes in public environmental health policy in the European Union are driving global interest in cleaner technologies, including green chemistry, and a growing number of downstream businesses are calling for greater transparency and accountability on the part of chemical suppliers and producers. In light of these changes, the United States has a unique opportunity to correct longstanding

federal chemicals policy weaknesses and to implement a modern, comprehensive approach to chemicals policy that will build the foundation for new productive capacity in green chemistry. A modern, revised, proactive, and more comprehensive chemicals policy could position the United States to become a global leader in green chemistry innovation.

On the current trajectory, the United States could become a market for hazardous substances no longer permitted for sale in the European Union and other regions that are taking steps to implement modern chemicals policies. Further, hazard information submitted by chemical manufacturers is often designated as “confidential business information,” excluding the public from accessing accurate information on health effects and composition of chemicals.

Therefore, APHA calls on the US Congress to fundamentally restructure TSCA such that it—

1. Requires the generation, disclosure, and distribution by chemical producers of comprehensive chemical production, use, hazard, and exposure information in forms that are appropriate for use by the public, workers, industry, small businesses, and government.
2. Requires all chemicals now in commerce to be assessed by EPA using a hazard-based approach instead of a risk-based approach to evaluating chemicals to identify both those that pose potential or actual risks to human health and the environment and those that may serve as safer substitutes for chemicals posing risks to public environmental health.
3. Adds a chemical phase-out plan so that persistent, bioactive toxins (PBTs) are removed from the chemicals market.
4. Requires EPA to use the hazard information and other data generated through the High Production Volume Chemicals Program to develop methods in collaboration with National Institute for Occupational Safety and Health to evaluate the data for potential adverse human health effects such as in exposed groups of workers.
5. Serves as a vehicle for expanding the resources of federal and state agencies to efficiently assess the hazards of chemicals in commercial use and steadily reduce the production and use of those of greatest concern to public environmental health.
6. Introduces other mechanisms to motivate investment in the industrial and commercial application of green chemistry and in green chemistry research, technology development and diffusion, education, and technical assistance.
7. Amends TSCA’s confidential business information clause to insert a 5-year sunset clause to mandate disclosure of this public health information.

APHA calls on state legislatures to address chemicals policy at the state level for similar purposes and with similar goals.

## **[A Precautionary Approach to Reducing American Exposure to Endocrine Disrupting Chemicals](#)**

11/9/2010

There is clear evidence that exogenous hormones—those originating outside the body—can interfere with our own hormone function. Endocrine disrupting chemicals (EDCs) are broadly defined as chemical compounds that can interfere with hormone action. Well-known examples include estrogen, classified by the International Agency for Research on Cancer as a Group 1 human carcinogen, and diethylstilbestrol or DES (the first synthetic hormone), which the US Food and Drug Administration (FDA)



banned in 1971 for use in pregnant women after scientific studies showed higher cancer risks in their daughters.

The Endocrine Society—the premier professional organization for basic and clinical endocrine research and the treatment of endocrine disorders—published its first scientific statement in June 2009, summarizing voluminous science on the EDCs. EDCs identified included a heterogeneous list of synthetic and natural compounds also categorizable as pharmaceuticals (e.g., estrogen, DES), pesticides (methoxychlor, chlorpyrifos, dichlorodiphenyltrichloroethane or DDT), fungicides (vinclozolin), plastic monomers (bisphenol A or BPA), plasticizer additives (phthalates), polychlorinated biphenyls, polybrominated biphenyls, and dioxins.

#### Exposure to EDCs

Sources of human exposure to EDCs are diverse and, therefore, difficult to characterize in their entirety. Known or strongly suspected EDCs include, for example, not only lawn, garden, and agricultural pesticides but also chemicals found in commercial toys and other household and commercial products, as well as chemical ingredients in food packaging. In addition, overall exposure to EDCs involves only a part of widespread persistent exposure to a broader mix of indoor and outdoor chemicals and contaminants. Many such industrial chemicals leach into soil or groundwater and often enter the food chain, accumulating in humans and other animals higher in the food chain. People exposed to EDCs, therefore, consist not only of those working directly with industrial chemicals and with pesticides and fungicides but also the rest of the population that drinks the water, breathes the air, ingests food, contacts the soil, or uses products contaminated with these same chemicals.

In terms of cumulative EDC exposure at the individual level, the human body integrates exposure to diverse but potentially synergistic EDCs across these different sources of exposure. The National Exposure Reports of the Centers for Disease Control and Prevention (CDC) confirm that there is widespread exposure to chemical mixtures across the population, including multiple EDCs. Exposure begins in utero; CDC biomonitoring data indicate that several dozen industrial chemicals, including some EDCs, are routinely found in amniotic fluid. This finding, combined with the importance of hormones to fetal and child development, indicates the increased vulnerability of developing fetuses and infants stemming from exposure to endocrine disrupting chemicals.

#### EDC Toxicity

In terms of toxicity, the Endocrine Society's June 2009 scientific statement reads in part, "Results from animal models, human clinical observations, and epidemiological studies converge to implicate EDCs (endocrine disrupting chemicals) as a significant concern to public health." In particular, the Endocrine Society stated that,

- Because of the shared properties of the chemicals and the similarities of the receptors and enzymes involved in the synthesis, release, and degradation of hormones, no endocrine system is immune to endocrine disrupting chemicals.
- Effects of endocrine disrupting chemicals may be transmitted to further generations through germ line epigenetic modifications or from continued exposure of offspring to the environmental insult.
- The evidence for adverse reproductive outcomes (infertility, cancers, malformations) from exposure to endocrine disrupting chemicals is strong, and there is mounting evidence for effects on other endocrine systems, including thyroid, neuroendocrine, obesity and metabolism, and insulin and glucose homeostasis.

Today, many hormone-related chronic diseases are common or on the rise, including breast and prostate cancer, thyroid disease, obesity and diabetes, endometriosis, uterine fibroids, and infertility. Although these chronic conditions are multifactorial, the Endocrine Society statement reviews extensive literature associating exposure to individual EDCs with these same diseases.

Congress formally recognized EDCs as a public health concern in 1996 when it passed the Food Quality Protection Act (FQPA) and amendments to the Safe Drinking Water Act. Thirteen years later, in 2009, the US Environmental Protection Agency (EPA) issued its first test orders for screening of dozens of high-priority pesticides for endocrine disrupting effects. However, there is no comprehensive, coordinated approach to regulating EDCs in the United States. In other words, while independent testing of some isolated few chemicals may already have shown them to have endocrine-disrupting activity, such hazard or safety testing has never been performed for the balance of the tens of thousands of EPA-registered compounds in use and in the environment today. Thus, policies must be developed to consistently and comprehensively examine all chemicals for potential EDC activity.

#### The Precautionary Principle

Besides the lack of safety testing, it is the nature of science that some uncertainty around specific scientific issues pertaining to individual EDCs will persist. Conventional toxicological testing of environmental chemicals, for example, is based on presumptions about high-level exposures being predictive of effects at lower levels of exposure. The robust science around EDCs generally calls that toxicological precept into question. The Endocrine Society's 2009 position statement therefore is grounded in the Precautionary Principle: "When conclusive evidence is lacking, but sound scientific studies indicate a strong possibility for adverse health effects, it is the responsibility of the federal government to develop policies that protect people from the risk of exposure, or at the very least inform them of [the risk to public health]."

Similarly, the American Public Health Association (APHA) has longstanding support for the science-based application of the Precautionary Principle, which "encourages precautionary action to prevent potential harm to fetuses, infants, and children [from the continued manufacture and use of substances], even if some cause and effect relationships have not been established with scientific certainty." For example, 2009 APHA policy urges the withdrawal of intentional economic uses of exogenous hormones from food production. By contrast, the proposed policy would address regulation of commercial EDCs used intentionally for applications that often can unintentionally come to contaminate food and water. The APHA also is concerned that the public may be placed at risk because critical information about potential health effects of endocrine disrupting chemicals to which Americans are exposed is being overlooked in the development of federal guidelines and regulations. Reflecting a broad consensus among the entire medical community that more needs to be done to protect the public from potential health risks of exposure to EDCs and, more specifically reflecting the findings and recommendations of The Endocrine Society's June 2009 peer-reviewed Scientific Statement on EDCs, APHA therefore adopts the following resolution, largely derived from that originated by the Endocrine Society and later endorsed by the American Medical Association.

APHA urges—

- Support for the Endocrine Society and the American Medical Association in proclaiming that more needs to be done to protect the public from potential health risks of exposure to EDCs.
- That given the magnitude and urgency of the public health threat and the recognition that collectively EDCs likely will have common or overlapping effects on the endocrine system, steps should therefore be taken by federal agencies with regulatory oversight for various individual EDCs to coordinate and find synergies among themselves to coordinate and find synergy among federal agencies with regulatory

oversight over various individual EDCs.

- Health professionals and scientists with expertise in various aspects of the toxicity, exposure, and environmental fate of EDCs, throughout the lifecycle of their manufacture, use, distribution, and disposal be consulted and be active participants in the development of public policies to regulate and restrict EDCs. These may consist of, for example, endocrinologists, toxicologists, occupational/environmental medicine specialists, epidemiologists, and policymakers.
- That these public policies further should be based on data that comprehensively include both low-level and high-level exposures.

## **The Precautionary Principle and Children's health**

1/1/2000

Recognizing that, for centuries, the cornerstone of public health policy and practice has been the prevention of injury and disease; and Recognizing that the US has signed the Rio Declaration on Environment and Development which states; In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation, a statement known as the Precautionary Principal; and Recognizing that the American Public Health Association has previously encouraged the implementation of the Precautionary Principle with regard to workplace chemical exposure prevention policies; and Recognizing that current environmental regulations are primarily aimed at controlling pollution rather than using primary preventive measures to avoid the use, production, or release of toxic materials; and Recognizing that development of enterprises, projects, technologies, products, and substances, that may adversely affect public health proceeds through initiatives that may or may not have considered a range of safer alternatives; and Recognizing that many of these enterprises, projects, technologies, products, and substances are considered safe until proven harmful; and Recognizing that public health decisions must often be made in the absence of scientific certainty, or in the absence of perfect information; and Recognizing that some industries engaged in the production, release, or distribution of potentially hazardous products and processes use their influence to delay preventive action, arguing that the immediate expense of redesign to achieve pollution prevention is unwarranted, lacking scientific certainty about harmful health effects; and Recognizing that fetuses, children, and all developing organisms are often more susceptible to environmental contaminants than adults, and that agency policies and decisions often fail to reflect this unique susceptibility; and Recognizing that proof of cause and effect relationships is often difficult to establish because of non-specificity of health effects, long latent periods, subtle changes in function that are difficult to detect without resource-intensive studies, and complex interactions of variables that contribute to adverse health effects; and Recognizing that some lack of scientific certainty is irresolvable by more data collection; that some residual lack of scientific certainty is actually the result of indeterminacy due to multiple factors interacting in complex systems or due to ignorance about what questions to ask or what effects to look for; and Declaring that children and other sensitive populations are, therefore, in particular need of protection from environmentally related hazards; and Recognizing that Presidential Executive Order #13045 requires that all federal agencies, when developing policies, must explicitly consider their impacts on children, therefore,

- Reaffirms its explicit endorsement of the precautionary principle as a cornerstone of preventive public health policy and practice, both in the U.S. and throughout the world;
- Encourages governments at all levels, the private sector, and health professionals to promote and abide by this principle in order to protect the health and well-being of all developing children. Thus,

APHA calls for explicit inclusion of the precautionary approach in all federal, state, and local legislation, rules, or policies intended to protect children or that may impact the health of children;

- Urges that whenever an enterprise, project, technology, product, or substance is proposed for initiation, manufacture, or use or continued manufacture or use the goal of public health advocates should be to reduce or eliminate the creation of conditions that may adversely impact reproductive health, infants, or children;
- Advocates significant increases in pollution prevention efforts through clean production, assessment of safer alternatives, energy efficiency, waste minimization, safer waste disposal methods, and reduced consumption as a general means to protect children's health and development, rather than relying on risk management of individual hazards;
- Encourages explicit consideration of the kinds and magnitude of harm to reproductive health, infants, or children that may result from an activity and its alternatives;
- Encourages explicit consideration of the kinds and magnitude of uncertainties inherent in assessing potential harm to reproductive health, infants, or children from an activity and its alternatives;
- Encourages precautionary action to prevent potential harm to reproductive health, infants, and children, even if some cause and effect relationships have not been established with scientific certainty;
- Urges scientists to engage in analysis and studies to develop implementation strategies using the precautionary principle that are based on sound science.
- Enunciates the urgent need for improved research methods to understand better the additive, cumulative, and synergistic effects of multiple stressors on children's development and health; and.
- Urges the United States to honor and explicitly refer to the precautionary principle during negotiations of international agreements, while working to establish the precautionary principle as a guiding principle of environmental and health-related international law.

### **Preventing Human Exposure to Polybrominated diphenyl ether (PBDE) Flame Retardants to Protect Public Health**

11/9/2004

This policy, acknowledging that polybrominated diphenyl ether (PBDE) flame retardant compounds are widely used and chemically similar to PCBs, and noting more recent recognition that PBDEs are environmentally persistent, rapidly bioaccumulate in human tissue including breast milk and function as developmental neurotoxicants in animals, urges proactive steps to reduce human exposure citing especially APHA policy (#200011) encouraging "precautionary action to prevent potential harm to reproductive health, infants, and children, even if some cause and effect relationships have not been established with scientific certainty."

More specifically, PBDEs are commonly used flame retardants found in foam products, textiles, electrical equipment, building materials and transportation. Penta-BDE, octa-BDE and deca-BDE are three of the most common commercial classes, with varying numbers of bromine atoms per molecule. Chemically, they look very much like PCBs, which were banned in 1976 due to their high toxicity and persistence and now conclusive evidence that they cause neurodevelopmental problems in children.

Aside from their fire-retardant properties, PBDES are potent toxins that persist in the environment and bioaccumulate in the food chain and in human tissues. Like PCBs, PBDEs are lipophilic and have been found in fish, bird eggs and marine mammals as well as in human milk, fat and blood. While PCB levels in fish and breast milk have slowly declined since being banned, PBDE levels are increasing at an exponential rate. A 100-fold increase in total PBDEs was noted in Lake Ontario trout between 1978 and

1998. Body burdens of PBDEs in San Francisco Bay Harbor seals increased by a factor of 100 between 1989 and 1998. Total PBDE levels in human milk, blood and tissues have increased by a factor of 100 during the past 30 years, doubling about every five years. PBDE levels in U.S. women's breast milk are typically 10-100 times higher than levels in European women and are now approaching concentrations at which health effects have been observed in laboratory animals.

Although human data on health effects are still lacking for PBDEs, ample data on toxicity are available from animal studies. These studies document that PBDEs are toxic to the brain, reproductive system and liver and disrupt thyroid function. Effects on thyroid function provide a plausible mechanism for PBDEs' possible adverse effects on child development. Human studies already document adverse effects on intelligence and psychomotor skills in children with disruptions in thyroid levels in the womb through the second year of life. One study found that workers exposed to PBDEs experienced higher prevalence of hypothyroidism. Concurrent exposure to both PBDEs and PCBs, as from consuming some fatty fish, may present an increased risk since some researchers have found additive or synergistic effects between the two chemicals.

PBDEs have been detected in household dust, food, and in air drawn from a warm TV, but the major human exposure pathways have yet to be identified. PBDEs with fewer bromines, such as penta, have the highest potential for bioaccumulation and are typically the most common classes found in humans, fish and other wildlife. Scientists, however, have increasingly been finding deca-BDEs and other higher brominated congeners in biota. Moreover, it is clear that deca can debrominate and convert to the more bioavailable forms in the environment and potentially during metabolism as well, making them a greater health risk than originally thought.

Global PBDE production totaled 150 million pounds in 1999, over 50 percent of which was used in the Americas. Deca-BDE is the most widely used class of BDE at 80 percent of worldwide production. Like PCBs, PBDEs flame retardants are now ubiquitous in the environment. The European Chemicals Bureau estimates that 75 percent of penta-BDE emissions will end up in soil and 24.9 percent in surface water and sediment. Measured levels of PBDEs in U.S. sewage sludge are 40 times that of European sludge. Eliminating most uses of PBDE flame retardants is possible, and a prudent step to protect public health. Concerns about rising levels of PBDEs in the breast milk of Swedish women led to efforts by industrial users in both Sweden and Germany to phase out the use of these chemicals. These actions have led to a decline in PBDE levels in breast milk of Swedish women. The European Union has enacted a ban on penta and octa-BDEs and is considering a ban on deca-BDEs as well. The states of California, Hawaii, New York, and Maine have enacted phase-outs of penta and octa-BDEs. Minnesota, Massachusetts, Michigan, Washington and Maryland have proposed similar state-level phase-outs.

Alternatives to the use of PBDE flame retardants are available and cost effective. Alternatives include: product redesign to eliminate the need for added chemicals; use of naturally flame retardant materials like wool and leather or plastics containing sulfur; and use of less toxic alternatives. The German Environmental Agency selected red phosphorus, ammonium polyphosphate and aluminum trihydroxide as alternatives with the least adverse environmental impact.

Some computer and electronics manufacturers like Apple, Ericsson, IBM, Intel, Motorola, Panasonic, Phillips, and Sony are using alternatives. For example, Motorola now uses a halogen-free laminate that is cost effective, while meeting fire safety standards. Toshiba has replaced BFR-containing plastic casings in electronic parts with inherently flame-resistant polyphenylene sulfide. IKEA furniture, Crate and Barrel and Eddie Bauer are requesting PBDE-free polyurethane foam from their manufacturer Hickory Springs.

Although global manufacturers of these compounds continue to produce, as well as export, their products to the United States, one of the two U.S. manufacturers of PBDEs, Great Lakes Chemical, has already announced that they will phase out production of penta and octa-BDEs by 2005. The remaining U.S. manufacturer, Albemarle, continues to manufacture deca-BDE. By calling for a reasonable time frame for phase-out of deca-BDEs, impacts on businesses and workers could be minimized. Phasing out these compounds and substituting safer alternatives protects U.S. manufacturers of PBDEs and companies that use them in their products from potential liability and helps maintain a European market for products requiring flame retardant properties. Since exposure to PBDEs may include an inhalation route of exposure, phasing out the manufacture of these chemicals should better protect the health of workers in industries dealing with PBDEs.

A PBDE phase-out may result in job loss for existing production workers. APHA policy statement 9304 acknowledges potential worker impacts and calls for assistance to workers who are displaced by technological changes. New research further supports the need for Work Environment Impact Assessments prior to chemical phase-outs/bans in order to prevent the shifting of risks to workers within the affected industry. A PBDE phase-out also provides economic opportunities for workers in industries which make safer alternatives to PBDE flame retardants.

In light of the aforementioned emerging science on the inherent toxicity and persistence of PBDEs, evidence of adverse health effects on animals and the prevalence and rising levels in fish, biota and human breast milk, immediate action is needed to prevent further environmental contamination and to protect public health.

Therefore, The American Public Health Association hereby:

1. Resolves: That APHA urge state and federal governments to require the use of PBDE flame retardants be phased out in all products manufactured and sold in the United States by a date certain; and
2. Resolves: That APHA urge state and federal governments, in enacting such phase-outs, to consider policies that alleviate short-term economic impacts on the PBDE production workforce, and to also consider economic benefits to workers in industries making safer alternatives; and
3. Resolves: That APHA urge state and federal governments to provide financial incentives for development and use of alternative flame retardants or preferably changes in product design to increase fire resistance without use of chemicals, to assure fire safety, while protecting the public from toxic exposures; that alternative flame retardants be adequately tested for toxicity; and that environmental and health safety must be assured prior to use; and
4. Resolves: That APHA urge state and federal governments to require labeling of chemical flame retardants used in products; and
5. Resolves: That APHA urge state, federal and local governments to regulate the safe disposal of products containing brominated flame retardants and to prohibit land application of sewage sludge until testing can assure that such material does not contain measurable levels of PBDEs; and
6. Resolves: That APHA urge the U.S. Centers for Disease Control and Prevention to expand the national biomonitoring program to include PBDEs and to increase the number of people studied; and
7. Resolves: That APHA urge Congress to increase funding for research on PBDE flame retardants, including monitoring levels of PBDEs in fish, sediments, human milk, blood and tissue, and additional research into exposure routes and human health effects from these exposures.

## **Reproductive Health and Rights of Workers**

1/1/1979

The American Public Health Association, understanding that both men and women workers are at risk from exposure to substances such as lead, waste anesthetic gases, and carbon disulfide which may damage their reproductive systems and potentially affect their offspring; and

Noting that there is a need to protect all workers in the workplace regardless of sex, including the need to protect reproductive capabilities; and

Recognizing that their rights can be assured only when workplace exposures to chemicals and other hazards are reduced to a level which is safe for both men and women; and

Noting that corporations have responded to the reproductive hazards posed by chemicals in their plants by adopting a policy of altering the workforce rather than the workplace; that is, corporations are eliminating workers they consider "vulnerable" rather than eliminating the hazards, e.g., women are being fired from jobs in lead smelters and from jobs in the rubber industry where workers handle vinyl chloride; and

Appreciating that workers who are already in these plants are faced with a Draconian choice between their jobs and the risks of sterility, reproductive problems or children with birth defects; and

Noting that male workers continuing to work with hazardous exposures risk sterility and birth defects in their children; and

Noting further that workers seeking jobs in these plants are being excluded solely because of their reproductive capacity, e.g., General Motors is refusing to hire fertile women at their Delco-Remy battery plants where lead is handled; and

Recognizing that the most conspicuous victims of this discriminatory policy are women in the chemical, nuclear, automobile, rubber and steel industries; and

Noting that under the guise of concern for fetuses, their employers are forcing them to choose between sterilization or loss of their jobs and have stopped hiring women for jobs posing any reproductive hazards, e.g., at Willow Island, West Virginia, five women working for the American Cyanamid Company had themselves sterilized in order to keep their jobs; and

Noting that this so-called corporate concern for fetuses, has focused on women in better paying jobs in industries in which they have not traditionally worked and little concern has been shown for the fetuses of women in traditional, lower paying jobs; and

Noting that men are the victims of this corporate policy as much as are their women co-workers because if they remain in plants where they are exposed to toxic substances, they face the possibility of impotency, sterility or genetic mutations which cause birth defects in their children; therefore,

1. Condemns the corporate practice of forcing workers to choose between their jobs and the right to reproduce, and urges that copies of this resolution be sent to the Occupational Safety and Health Administration, the National Institute for Occupational Safety and Health, the Equal Employment Opportunity Committee, and other relevant federal agencies as well as members of relevant committees of Congress;

2. Urges that NIOSH develop and OSHA disseminate support and enforce appropriate occupational exposure standards that protect women, men, and the fetus;
3. Urges that labor unions, OSHA/MSHA, and federal and state legislation support the right of pregnant workers or workers who intend to reproduce to transfer, upon request, to safe jobs with full rate retention and all seniority rights during the interim while standards that protect all workers and the fetus are established and met; and
4. Joins with other concerned groups and individuals in the Coalition for the Reproductive Rights of Workers.



## **California Medical Association**

For CMA resolutions, “Whereas” statements are for reference; only the “Resolved” are CMA policy.

### **NANOTECHNOLOGY AS A PROHIBITED SUBSTANCE IN ORGANIC FOOD PRODUCTION**

10/13

RESOLVED: That CMA endorse labeling of foods and packaging containing engineered nanoparticles including nanoparticle specifications, as reasonable, to allow public health monitoring; and be it further

RESOLVED: That this be referred for national action.

### **PHASE-OUT OF SOIL FUMIGANTS**

10/13

RESOLVED: That CMA urge the office of the California Governor, the California Department of Pesticide Regulation, and the California Department of Food and Agriculture to support growers and protect public health by funding and implementing a program to transition California agriculture to effective, least-toxic and affordable non-fumigant replacements for soil fumigant pesticides and to phase out soil fumigants as soon as possible; and be it further

RESOLVED: That CMA urge the office of the California Governor and California Department of Pesticide Regulation to strengthen mitigation measures for fumigants such as buffer zones to protect residents from potential health risks, especially where children, pregnant women, elderly, and other vulnerable populations live, work and play.

### **HYDRAULIC FRACTURING MONITORING, REGULATION AND DISCLOSURE**

10/13

RESOLVED: That CMA endorse efforts to remove trade secret exemptions and other restrictions that do not allow full disclosure of chemicals used in hydraulic fracturing to physicians, appropriate government agencies and the public in order to optimally treat patients with acute and long term adverse health effects potentially related to fracking chemicals in addition to enabling protection of public health through prevention; and be it further

RESOLVED: That CMA encourage government agencies to perform health assessments prior to new hydraulic fracturing development projects; and be it further

RESOLVED: That CMA endorse efforts to implement hydraulic fracking regulations, monitoring, funding and enforcement efforts in 17 order to protect public health, the environment and vital water resources.

### **PVC Plastic Use by Health Care Facilities**

3/98

RESOLVED: That the CMA encourage the study and evaluation of alternative products and practices that will lead to the reduction and elimination of dioxin release into the environment from medical products composed of chlorinated hydrocarbons; and be it further

RESOLVED: That the CMA refer this issue for national action.

### **Healthy Schools**

3/99

RESOLVED, That the CMA support efforts to protect indoor air at California schools through increased funding for school maintenance; improved standards for school design, construction and repair, including portable or temporary school structures; and increased indoor air quality training and monitoring; and be it further

RESOLVED, That the CMA support efforts to adopt standards and provide training for the purpose of reducing or eliminating in-school exposures to lead; and be it further

RESOLVED, That the CMA recommend statewide implementation of least-toxic school pest management programs, with such programs precluding the use of highly toxic pesticides, reducing over-all pesticide use in and around school grounds, and including parents in pest management decision making.

### **Preventing Human Mercury Exposure**

2000

RESOLVED: That the California Medical Association encourages the reduced use of mercury-containing products by urging medical product suppliers to continue to develop, produce, and bring to market appropriate, cost-competitive, environmentally protective, and effective mercury-free replacements; and, be it further

RESOLVED: That the CMA calls upon health care professionals to encourage the institutions with which they are associated to adopt policies that will lead toward the eventual elimination of mercury containing products where feasible, effective alternatives are available, and to promptly eliminate mercury from the waste-stream fed into incinerators.

### **Farmworker Protection from Pesticides**

2000

RESOLVED: That the CMA support efforts to reduce farmworker exposure to pesticides by calling on the State to reduce aerial spraying of pesticides, to take steps to reduce pesticide drift, and to eliminate applications where workers will have high risks of exposure; and be it further

RESOLVED: That the CMA recommend that the Department of Pesticide Regulation require effective posting for all agricultural pesticide applications in culturally appropriate language that is highly visible; and be it further

RESOLVED: That the CMA support strengthening enforcement of existing laws by increasing fine levels for serious violations of farmworker protection laws; and be it further

RESOLVED: That CMA encourage physician awareness of pesticide illness, and its reporting law.

### **Agricultural Pesticide Drift**

2000

RESOLVED: That the CMA support efforts to protect California communities from pesticides in the air by calling upon state agencies such as DHS and CALEPA to strengthen efforts to protect schools and residential areas from pesticide drift and off-site pesticide movement; and be it further

RESOLVE: That the CMA support a reduction in use of pesticides with significant acute and chronic toxicity, such as Proposition 65 pesticides and Category I and II pesticides, that have a capacity to drift to schools and residential areas; and be it further

RESOLVED: That the CMA recommend that state agencies such as DHS and CALEPA develop procedures to provide adequate notification of full- or part-time inhabitants of sites at risk of pesticide drift, as part of the statewide permitting process regarding plans for application of pesticides in such areas.

### **DEHP Use in Neonatal Intensive Care Units**

3/12/01

RESOLVED, That CMA strongly urges all hospitals to phase out their use of PVC products containing DEHP in Neonatal Intensive Care Units and encourages the use of commercially available alternatives; and, be it further

RESOLVED, That CMA calls upon health professionals, especially those involved in the care of critically ill infants, to encourage the institutions with which they are associated to adopt purchasing policies that will lead to the increasing use of non-DEHP medical devices in Neonatal Intensive Care Units; and, be it further

RESOLVED, That the CMA urge further study of the safety of the use of PVC products containing DEHP in neonatal intensive care units; and be it further

RESOLVED, That the CMA encourages medical device manufacturers to continue developing PVC-free and DEHP-free medical devices while phasing out production of those that contain PVC and/or DEHP due to problems associated with their disposal; and be it further RESOLVED, that this matter be referred to the AMA for national action.

## **Air Pollution, Energy, and Health**

2/24/02

RESOLVED, That CMA encourage the state of California to develop a mechanism to ensure that the cleanest power generating units, including renewably-fueled units, run first and most often, while encouraging all health care facilities to use the cleanest available technologies for emergency power generation; and be it further

RESOLVED, That CMA encourage the state of California to fully explore and quantify the health costs of air pollution in developing energy policies, aimed at off-setting the cost impacts of retiring old power plants and replacing them with renewable energy sources, and for transforming the transportation infrastructure to ease the introduction of clean, alternative vehicles into the market; and be it further

RESOLVED, That CMA encourage the state of California to explore strategies to fund petroleum demand reduction strategies, to clean-up and mitigate transportation and petroleum related air and water pollution, and to support new, clean transportation technologies and infrastructure planning.

## **Climate Change and Human Health**

2/24/02

RESOLVED, That CMA strongly urge the President of the United States to take proactive steps to curb greenhouse emissions and work with other nations to address the increasing dangers of global climate change by committing to binding reduction targets for emissions; and be it further

RESOLVED, That this matter be referred for national action.

## **Toxicity of Computers and Electronics Waste**

3/24/03

Resolved: That CMA encourages its members and California health institutions to adopt purchasing or leasing contracts only with electronics manufacturers who are committed to safely handling the products at the end of life, meaning that they reuse and recycle to the greatest extent possible, do not export hazardous electronic waste to developing countries, and safely dispose of the waste that cannot be reused or recycled; and be it further

RESOLVED: That CMA encourages its members and California health institutions to provide purchasing/leasing preferences to electronics manufacturers that minimize the use of toxic and hazardous constituents, use recycled content, and design products that can be easily recycled in order to minimize the adverse public health impacts from electronic waste; and be it further

RESOLVED: That CMA support policies that hold electronics manufacturers responsible for taking back their products at the end of life, with the objective of re-designing their products for longevity and reduction of harmful materials; and be it further

RESOLVED: That the CMA refer this issue for national action.

## **Scientific Credibility of Government Public Health Advisory Committees**

3/25/03

RESOLVED: That CMA calls on government officials at all levels to closely follow the existing guidelines set forth in the Federal Advisory Committee Act pertaining to the membership on scientific and public health advisory committees and to develop more specific criteria related to scientific expertise, financial disclosure, conflict of interest and diversity; and be it further

RESOLVED: That CMA should refer this issue for national action.

## **Reducing Major Sources of Diesel Exhaust**

3/15/04

RESOLVED, That CMA encourage the U.S. EPA to finalize the most stringent feasible standards to control pollutant emissions from both large and small non-road engines including construction equipment, farm equipment, boats, and trains; and be it further

RESOLVED, That CMA encourage the State of California to continue to pursue opportunities to reduce diesel exhaust pollution, including reducing harmful emissions from existing diesel vehicles; and be it further

RESOLVED, That CMA call for all trucks traveling within the California and the United States, regardless of country of origin, to be in compliance with new diesel emissions standards promulgated by U.S. EPA.; and be it further

RESOLVED, that CMA should refer this issue for national action.

## **Modern Chemicals Policy**

10/29/07

Resolved: That the CMA call upon the State of California and United States to implement a state and national modern, comprehensive chemicals policy in line with current scientific knowledge on human health, and which requires a full evaluation of the health impacts of both newly developed and existing industrial chemicals now in use; And be it further

RESOLVED: That this matter be referred for national action.

## **Improving Health through Sustainable Food Purchasing**

10/29/07

RESOLVED: That the CMA encourages hospitals to adopt policies and implement practices that increase the purchasing and serving of food that promotes health and prevents disease, including meat and dairy products produced without nontherapeutic antibiotics, meats derived from non-Concentrated Animal Feeding Operation (CAFO) sources such as free-range animals, food grown on non-industrial agricultural

operations such as small and medium-sized local farms; and food grown according to organic or other methods that emphasize renewable resources, ecological diversity, and fair labor practices, and be it further

RESOLVED: That the CMA calls on physicians and other health care professionals to serve as models and educators by participating in and promoting a healthier and more sustainable food system that improves eating habits, increases patient and public health, and supports the long-term social, economic, and environmental well-being of communities in California and throughout the world.

## **Safe Bicycle Routes**

1/07

RESOLVED: That CMA continue to support safe bicycle routes throughout California.

## **Cancer and Environmental Chemicals**

5/07

RESOLVED: That CMA recognizes the important and growing body of scientific evidence linking some common environmental chemicals to human cancers, and encourage educational and advocacy efforts and be it further

RESOLVED: That this matter be referred for national action.

## **Rating System for Processed Foods**

8/08

RESOLVED: That CMA support the concept of a simple nutrition food label, representing a grading system, to be used in addition to the current food label and be it further

RESOLVED: That this matter be referred for national action.

## **Health and Protective Federal Ozone Standard**

1/07

RESOLVED: That CMA support the 2007 national ozone standards (0.0X0-0.070 parts per million) recommended by Environmental Protection Agency scientists and supported by the American Lung Association and other reputable health advocates and be it further

RESOLVED: That this matter be referred for national action.

## **Air Pollution and Public Health**

1/07

RESOLVED: That CMA support increased physician participation in regional and state decision-making regarding air pollution in California and be it further

RESOLVED: That CMA promote education among its members and the general public and support efforts that lead to significant emissions reduction in California with particular attention to diesel truck emissions and be it further

RESOLVED: That CMA declare that there is an urgent need for all California authorities to expeditiously adopt, and aggressively implement, effective control strategies to reduce emissions as quickly as possible and be it further

RESOLVED: That this matter be referred for national action

## **Healthy Fast Food Children's Meals**

10/17/11

RESOLVED: That CMA recommend chain restaurant adherence to appropriate nutritional standards for their meals that are marketed specifically to children, especially those that include a toy or promotional item; and be it further

RESOLVED: That CMA support that meals marketed to children should adhere to healthy guidelines for total calories, fat calories, saturated fat, trans fat, sodium, and fruit and vegetable content in accordance with the best available evidence and/or well- researched national nutrition standards such as the USDA Dietary Guidelines for Americans.

## **Healthy Food Marketing For Children**

10/17/11

RESOLVED: That CMA support efforts to regulate the advertising and marketing of unhealthy food and beverages to children; and be it further

RESOLVED: That CMA discourage the advertising and marketing of unhealthy food and beverages in public places frequently visited by children or adolescents, such as schools and be it further

RESOLVED: That CMA encourage media education programs to reduce 41 harmful health influences of food and beverage marketing to children and to promote the consumption of healthy foods; and be it further

RESOLVED: That this be referred for national action.

## **Healthy Agricultural Practices**

10/17/11

RESOLVED: That CMA support the development of healthier food systems through federal farm subsidies and legislation; and be it further

RESOLVED: That CMA support healthy agricultural practices including, but not limited to, improved food safety, sustainable production methods, reduction of pesticide use, regulation of confined animal feeding operations (CAFOs) and support for local/regional food systems.

Nanoparticle testing, monitoring and Regulation

RESOLVED: That CMA recognize both the benefits and the potential risks to public health and the environment from the widespread use of nanoparticles; and be it further

RESOLVED: That CMA endorse responsible regulation of existing or new nanoparticles prior to their introduction in industrial or consumer products, such as, but not limited to, standardized research, toxicological testing, biomonitoring and product labeling; and be it further

RESOLVED: That this matter be referred for national action.

## **Triclosan Antimicrobial Soap**

10/17/11

RESOLVED: That CMA recognize the toxicity and potential adverse health and environmental effects of Triclosan-containing products and endorse efforts to eliminate this chemical from consumer and health care products; and be it further

RESOLVED: That CMA encourage the Food and Drug Administration to finalize the antimicrobial monograph first drafted in 1978 and updated in 1994 which found evidence for the safety and effectiveness of only alcohol and iodine-based topical products in health care use; and be it further

RESOLVED: That CMA encourage the education of members on the issue of the importance of proper hand hygiene and the preferential use of plain soap and water or alcohol-based hand sanitizers in health care settings, consistent with the recommendations of the Centers for Disease Control; and be it further

RESOLVED: That this matter be referred for national action.



## The Endocrine Society

### Endocrine-Disrupting Chemicals

6/09

There is growing interest in the possible health threat posed by endocrine-disrupting chemicals (EDCs), which are substances in our environment, food, and consumer products that interfere with hormone biosynthesis, metabolism, or action resulting in a deviation from normal homeostatic control or reproduction. In this first Scientific Statement of The Endocrine Society, we present the evidence that endocrine disruptors have effects on male and female reproduction, breast development and cancer, prostate cancer, neuroendocrinology, thyroid, metabolism and obesity and cardiovascular endocrinology. Results from animal models, human clinical observations, and epidemiological studies converge to implicate EDCs as a significant concern to public health. The mechanisms of EDCs involve divergent pathways including (but not limited to) estrogenic, antiandrogenic, thyroid, peroxisome proliferator-activated receptor retinoid, and actions through other nuclear receptors; steroidogenic enzymes; neurotransmitter receptors and systems; and many other pathways that are highly conserved in wildlife and humans, and which can be modeled in laboratory in vitro and in vivo models. Furthermore, EDCs represent a broad class of molecules such as organochlorinated pesticides and industrial chemicals, plastics and plasticizers, fuels, and many other chemicals that are present in the environment or are in widespread use. We make a number of recommendations to increase understanding of effects of EDCs, including enhancing increased basic and clinical research, invoking the precautionary principle, and advocating involvement of individual and scientific society stakeholders in communicating and implementing changes in public policy and awareness.

### Society Letter to EU Commission

3/6/2013

Dear President Barroso,  
Dear Commissioners Tajani, Potočník, and Borg,

As the European Commission prepares to take action on endocrine-disrupting chemicals, The Endocrine Society submits this open letter urging you to call upon the expertise of endocrinologists in your deliberations. Endocrinologists bring a necessary perspective to the discussion of endocrine disrupting chemicals (EDCs), as they examine the actions of these chemicals in the context of normal physiology and they understand the subtle and nuanced effects EDCs exert on the endocrine system. Furthermore, fundamental principles of endocrinology must be applied in any program that is intended to identify and/or evaluate EDCs.

Founded in 1916, The Endocrine Society is the world's oldest, largest and most active organization devoted to research on hormones and the clinical practice of endocrinology. Today, The Endocrine Society's membership consists of more than 16,000 scientists, physicians, educators, nurses and students in more than 100 countries, including 24 EU member states. Society members represent all basic, applied and clinical interests in endocrinology. Included among our members are the world's leading experts on hormones and on the endocrine effects of environmental chemicals.

Drawing on the expertise of its members, The Endocrine Society published a Scientific Statement on

EDCs in June 2009.<sup>1</sup> This statement presents a comprehensive evaluation of the scientific literature on EDCs, emphasizing their effects on male and female reproduction, breast development and cancer, prostate cancer, neuroendocrinology, thyroid, metabolism and obesity, and cardiovascular endocrinology. Since 2009, a number of additional publications have highlighted the potential adverse health effects of EDCs and have shown that these effects often are observed at very low levels of exposure. The most recent of these reports, from the WHO and UNEP, further highlights the need for better global regulation of EDCs.<sup>2</sup>

As evidence continues to mount, urgency for action increases. The call to action has been heeded by the Strategic Approach to International Chemicals Management, which at its 2012 meeting in Nairobi recognized by consensus the “...potential adverse effects of endocrine disruptors on human health and the environment” and “...the need to protect humans, and ecosystems and their constituent parts that are especially vulnerable.”<sup>3</sup> We look to the Commission and other international policymaking bodies to take the lead in improving EDC regulations.

Unlike many substances that have detrimental effects on health, endocrine disruptors exert their effects by interfering with endogenous hormone action. Therefore, EDCs must be examined in the context of endocrine principles that arise from decades of careful research into the mechanisms and consequences of hormone action under normal circumstances. That understanding is continuously evolving, and in 2012 the Society outlined key principles of endocrinology that must be incorporated into hazard/risk assessment protocols and must be considered when devising regulations to minimize exposure to EDCs.<sup>4</sup>

These principles apply equally to EDCs and to endogenous hormones; chief among them are the following concepts:

- Hormone effects are mediated by receptors
- Hormone effects can occur at very low doses
- Hormones exert multiple actions in tissue-, cell-, and receptor-specific fashion
- Hormone effects are dependent upon developmental stage
- Effects of aberrant exposure can be irreversible, especially at critical stages of development
- Effects of aberrant exposure can become manifest latently, years after the exposure occurs
- Effects of aberrant exposure can be passed down for generations

Importantly, it cannot be assumed that a safe “threshold” level of exposure to any given EDC can be identified. Humans and wildlife are currently at risk of exposure to a large number of chemicals in food, drinking water, consumer products, and the air. Because EDC effects can occur at very low levels of exposure, and it is impossible to quantify an individual’s or a population’s baseline exposure to EDCs, it would be impossible to assign a lower safe limit of additional exposure.

The Endocrine Society and its members stand ready to help you in any way we can during your deliberations. You have before you a large and difficult task; we encourage you to draw knowledge from the advances in the field of endocrinology as you make decisions that will have lasting impact on human and wildlife populations for generations to come.

Sincerely,

William F. Young, M.D.  
President, The Endocrine Society

- <sup>1</sup> <https://www.endocrine.org/endocrine-press/scientific-statements>
- <sup>2</sup> <http://www.unep.org/hazardoussubstances/UNEPsWork/EndocrineDisruptingChemicalsEDCs/tabid/79616/Default.aspx>
- <sup>3</sup> [http://www.saicm.org/index.php?option=com\\_content&view=article&id=458&Itemid=687](http://www.saicm.org/index.php?option=com_content&view=article&id=458&Itemid=687)
- <sup>4</sup> <http://endo.endojournals.org/content/153/9/4097.abstract>

## **European Network of Scientists for Social and Environmental Responsibility: Statement on Labeling of GM Food and Feed**

1/7/2014

ENSSER is in favor of labeling and recognizes that labeling of GMOs is essential for enabling food safety, for science-based monitoring of environmental and human health protection goals, and for ensuring the freedom of consumer choice. It is also a critical factor in insuring the proper operation of the market, as it is a basic tenant of free trade theory that it is impossible for the market to operate if consumers do not have complete information. Ensuring the traceability of GMOs through the establishment of labeling and traceability requirements has not been shown to result in higher food prices or burdensome financial costs for consumers in Europe. Some minimal costs are incurred at the producer and trader level of the GM-free supply chain, but these are absorbed during processing and handling into a finished product. We are not aware of any scientific study that shows a clear link to increased consumer prices for food due to GM labeling in any EU country when it has been introduced as a mandatory measure. ENSSER supports a system in which GMOs can be traced throughout food systems and scientifically identified, assessed and monitored so as to support the maintenance of food safety for both human health and the environment. Anything less risks compromising these core values.

## **Royal College of Obstetricians and Gynaecologists: Chemical Exposures During Pregnancy**

6/5/2013

This is a Scientific Impact Paper published by the RCOG's Scientific Advisory Committee and is designed to inform women who are pregnant or breastfeeding of the sources and routes of chemical exposure in order for them to take positive action in regard to minimizing harm to their unborn child.

This paper aims to raise awareness of the current issues surrounding chemical exposure during pregnancy and offers advice for women to make informed decisions that will predispose their baby to have the best possible health. There is currently no official antenatal advice that informs women of such potential risks that some chemical exposures could pose.

The authors explain that while the consumption of herbal remedies or medicines, such as paracetamol, and use of household cleaning products, such as pesticides, are well-documented sources of chemical exposure, this paper points out the lesser recognized sources that could accumulate with the mixture effect posing potential harm.

The paper suggests the best approach for pregnant women is a 'safety first' approach, which is to assume there is risk present even when it may be minimal or eventually unfounded. Recommendations made in the paper include: using fresh food whenever possible by reducing foods in cans/plastic containers, minimizing the use of personal care products, avoiding paint fumes and use of all pesticides, and only taking over-the-counter medicines when necessary.

The authors also suggest that information in the paper should be conveyed routinely in infertility and antenatal clinics so women are made aware of key facts that will allow them to make informed choices regarding lifestyle changes.

It also acknowledges that while there are growing concerns over everyday chemical exposure effects, realistically pregnant women are exposed to a complex mixture of hundreds of chemicals at low levels and methods for assessing the full risk of exposure are not yet developed.

### **American Dietetic Association: Food and nutrition professionals can implement practices to conserve natural resources and support ecological sustainability**

6/07

It is the position of the American Dietetic Association to encourage environmentally responsible practices that conserve natural resources, minimize the quantity of waste generated, and support the ecological sustainability of the food system—the process of food production, transformation, distribution, access, and consumption. Registered dietitians and dietetic technicians, registered, play various roles in the food system and work in settings where efforts to conserve can have significant effects. Natural resources that provide the foundation for the food system include biodiversity, soil, land, energy, water, and air. A food system that degrades or depletes its resource base is not sustainable. Making wise food purchases and food management decisions entails understanding the external costs of food production and foodservice and how these external costs affect food system sustainability. This position paper provides information, specific action-oriented strategies, and resources to guide registered dietitians and dietetic technicians, registered, in food decision making and professional practice. Food and nutrition professionals also can participate in policy making at the local, state, and national levels, and can support policies that encourage the development of local sustainable food systems. Our actions today have global consequences. Conserving and protecting resources will contribute to the sustainability of the global food system now and in the future.

### **Kaiser Permanente: Comprehensive Food Policy**

2006

Kaiser Permanente aspires to improve the health of our members, employees, our communities and the environment by increasing access to fresh, healthy food in and around Kaiser Permanente facilities. We will do so in a manner that promotes agricultural practices that are ecologically sound, economically viable, culturally appropriate and socially responsible.

We will accomplish this by aligning our food policies and practices with patient, member and employee wellness and health education programs, the expansion of Kaiser Permanente farm stands and farmers markets, and through our contracts with food suppliers and distributors.

We recognize our special responsibility as a health promotion organization. We will become a model for the industry and the nation by promoting healthy food choices in our inpatient food services, cafeterias, vending machines, food carts and catered meals.

We will work with local farmers, community-based organizations and food suppliers to increase the availability of locally-sourced food. Locally sourced food is fresher, tastes better and is associated with

increased consumption of fruits and vegetables. It also reduces negative impacts on the environment by reducing the distance food travels from farm to plate.

We will encourage our vendors to supply us with food that is, among other attributes, produced without synthetic pesticides and hormones or antibiotics given to animals in the absence of diagnosed disease.

We will work with our food suppliers to promote the health and safety of farm workers.

Taken together, these actions will promote a healthy environment and thriving communities by increasing access to fresh, healthy food in and around Kaiser Permanente facilities.

## **National Health Service: Saving Carbon, Improving Health**

1/09

This strategy has been produced by the NHS, for the NHS. It reflects the outcome of extensive consultation undertaken following the publication of Saving Carbon, Improving Health; a draft carbon reduction strategy for the NHS in England. The consultation demonstrated the importance of this issue to the NHS and the commitment of our staff to ensuring that we act now to reduce carbon emissions. The UK Government has committed to take action now and has introduced the Climate Change Act with a target to cut carbon emissions by at least 80% by 2050, with a minimum reduction of 26% by 2020 across the UK. The NHS aims to at least meet these targets and to demonstrate early success on the way. This ambition is supported by the Department of Health's Sustainable Development Strategy published in October 2008, designed to complement and support this strategy. Carbon management is an increasingly important issue for all organizations. Taking sustainability and carbon emissions seriously is an integral part of a high quality health service. We therefore welcome this Carbon Reduction Strategy for the NHS in England and applaud the ambition of the NHS to lead the way as a low carbon and sustainable organization

## **Catholic HealthCare West: Food and Nutrition Services Vision Statement**

2005

CHW recognizes that food production and distribution systems have wide ranging impacts on the quality of ecosystems and their communities, and so; CHW recognizes that healthy food is defined not only by nutritional quality, but equally by a food system which is economically viable, environmentally sustainable and which supports human dignity and justice, and so; CHW aspires to develop a healthy food system. We will work within our system to develop policies, procedures, supply contracts and education for staff, patients, and suppliers. As a healthcare system, we understand our role in health promotion and will effectively communicate, and model healthy food choices and programs in our system and local and national communities. We will work to promote and source from producers and processors which uphold the dignity of family, farmers, workers and their communities and support sustainable and humane agriculture systems. We will encourage labeling that tells where a food is from and how it was produced. We will work within our system and with our suppliers and distributors to maximize locally sourced foods, free of unnecessary hormones, pesticides, antibiotics and protective of biodiversity. We will work with our suppliers to promote sustainable food transportation systems and will source, when appropriate, local foods and those, which minimize inherent transportation impacts. We will ensure that food waste is minimized and beneficially reused, and support the use of food

packaging and products which are ecologically protective of our environment. Together these will promote health and protect quality of life.

### **The Breast Cancer Fund: State of the Evidence: The Connection Between Breast Cancer and the Environment**

2010

The Breast Cancer Fund's landmark report summarizes and evaluates the scientific evidence linking exposures to chemicals and radiation in our everyday environments to increased breast cancer risk. The 6th edition of the report also links the science to actions we can take to reduce the risk.

### **Environmental Working Group: Pollution in People: Cord Blood Contaminants in Minority Newborns**

12/09

The research, commissioned by the Environmental Working Group in partnership with Rachel's Network, marks the most extensive investigation of the particular environmental health risks faced by children of African American, Hispanic and Asian heritage.

### **California Pan-Ethnic Health Network: The Landscape of Opportunity: Cultivating Health Equity in California**

6/09

The California Pan-Ethnic Health Network brief examines the social and environmental determinants of health disparities and provides a powerful roadmap that points towards the type of policy changes we need to reverse health inequities and build a healthier California for ourselves and our children.

### **State Alliance for Federal Reform of Chemical Policy: Healthy States: Protecting Families from Toxic Chemicals While Congress Lags Behind**

11/10

The State Alliance for Federal Reform of chemical policy and the Safer Chemicals, Healthy Families coalition collaborated on the first-ever analysis of votes on state laws aimed at protecting the public from toxic chemicals.

### **Women's Foundation of California: Confronting Toxic Contamination in Our Communities**

2003

A report on women's health and the environment by the Women's Foundation of California. The signature report seeks to expand the environmental health and justice debate to include the unique experiences and concerns of women and girls, their families, and their communities.

## **California Health Salon Collaborative: Overexposed and Underinformed: Dismantling Barriers to Health and Safety in California Nail Salons**

4/09

A report by the California Healthy Salon Collaborative focusing on the current state of research on nail salon and other cosmetology workers, including identifying research gaps and areas that need more in-depth research to promote worker health and safety.

## **Illinois Public Health Association: Safer Chemicals Policy**

2008

BE IT RESOLVED, The IPHA calls upon the State of Illinois and the United States to implement a modern, comprehensive chemicals policy in line with current scientific knowledge on human health. The Toxic Substances Control Act should be restructured to: (1) Require chemical producers to provide comprehensive chemical hazard information in forms that are appropriate for use by the public, workers, industry, and government; and (2) Assess the human and environmental hazards of chemicals in commercial use and reduce or eliminate the use of those of greatest concern; and (3) Introduce mechanisms to motivate investment, education, and research in safer “green” chemical technology; and

FURTHER RESOLVED, The IPHA supports Illinois legislative efforts to protect the public, particularly children, from harmful chemicals in consumer products to reduce public exposure to toxic chemicals and improve the health of Illinois citizens.

AND FURTHER BE IT RESOLVED, that the IPHA requests that the APHA carry this resolution to the World Federation of Public Health Association supporting and urging involvement in the SAICM process leading to the sound management of chemicals throughout their life-cycle so that, by 2020, chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment.

## **Illinois Medical Association: A Modern Chemicals Policy**

2008

Whereas, A California Medical Association Resolution 712-07 reads:

RESOLVED: That the CMA calls upon the State of California and United States to implement a modern, comprehensive chemicals policy in line with current scientific knowledge on human health, and which requires a full evaluation of the health impacts of both newly developed and existing industrial chemicals now in use;

RESOLVED: That this matter be referred for national action (AMA); and

Whereas, In 2007, a Washington State Medical Association resolution encouraged safer chemicals policies and regulatory reform of industrial chemicals to protect and improve human life, as follows:



RESOLVED, that the WSMA supports Washington State legislative efforts to protect the public, particularly children, from harmful chemicals in consumer products, to reduce the burden of toxic exposure and improve public health for Washington's citizens.

Therefore, BE IT RESOLVED, That our American Medical Association gather all stakeholders to craft and develop a modern, comprehensive national chemicals policy. (Directive to Take Action)

## **Minnesota Public Health Association: Reform of Chemicals Policies to Protect Public Health**

2008

BE IT RESOLVED that the Minnesota Public Health Association:

1. Supports and urges Minnesota to become a leader among states in innovation and education in the area of cleaner technology, such as Green Chemistry; and
2. Supports and urges the Minnesota legislature to take action to protect the health of Minnesota citizens from unnecessary exposures to toxic chemicals by requiring the phase out of toxic, persistent, bioaccumulative chemicals in products and production processes when safer alternatives are available.

## **Minnesota Medical Association: Support Green Chemistry Innovation, Education and Regulatory Reform of Industrial Chemicals**

9/21/07

RESOLVED, that the Minnesota Medical Association supports and encourages Minnesota's leadership in education and innovation in the areas of cleaner technology, including green chemistry; and

RESOLVED, that the MMA's delegation submit a resolution to the American Medical Association urging the U.S. Congress to fundamentally restructure the Toxic Substances Control Act so that it requires the generation and distribution by chemical producers of comprehensive chemical hazard information in forms that are appropriate for use by the public, workers, industry, and government; (2) serves as a vehicle for expanding the capacity of federal and state agencies to efficiently assess the hazards of chemicals in commercial use and steadily reduce the production and use of those of greatest concern; and (3) introduces complementary federal mechanisms to motivate investment, education, and research in green chemistry science, technology, and education.

## **Oregon Public Health Association: Supporting Safer Chemical Policies to Protect Public Health**

2008

BE IT RESOLVED, The Oregon Public Health Association (OPHA) calls upon the State of Oregon and the United States to implement a modern, comprehensive chemicals policy in line with current scientific knowledge on human health. The Toxic Substances Control Act should be restructured to: (1) Require chemical producers to provide comprehensive chemical hazard information in forms that are appropriate for use by the public, workers, industry, and government; and (2) Assess the human and

environmental hazards of chemicals in commercial use and reduce or eliminate the use of those of greatest concern; and (3) Introduce mechanisms to motivate investment, education, and research in safer “green” chemical technology; and

AND FURTHER BE IT RESOLVED, The OPHA supports and urges Oregon legislative efforts to protect the public, particularly children, from harmful chemicals in consumer products, to reduce public exposure to toxic chemicals and improve public health for Oregon citizens.

## **Washington State Medical Association: Encouraging Safer Chemicals Policies and Regulatory Reform of Industrial Chemicals to Protect and Improve Human Health**

2008

BE IT RESOLVED, that the WSMA urge the AMA to support restructuring of the Toxic Substances Control Act to: (1) require chemical producers to provide comprehensive chemical hazard information in forms that are appropriate for use by the public, workers, industry, and government; and (2) serve as a vehicle to help federal and state agencies to efficiently assess the human and environmental hazards of chemicals in commercial use and reduce the use of those of greatest concern; and (3) introduce complementary federal mechanisms to motivate investment, education, and research in safer (‘green’) chemical technology,

AND BE IT FURTHER RESOLVED, that the WSMA supports Washington State legislative efforts to protect the public, particularly children, from harmful chemicals in consumer products, to reduce the burden of toxic exposure and improve public health for Washington’s citizens.

## **Washington State Public Health Association: Supporting Federal and Washington State Action to Implement a Comprehensive Chemicals Policy to Improve and Protect Public Health**

2007

Resolved, that: The WSPHA calls upon the U.S. Congress to fundamentally restructure the Toxic Substances Control Act such that it (1) requires the generation and distribution by chemical producers of comprehensive chemical hazard and chemical use information in forms that are appropriate for use by the public, workers, industry, and government; (2) expands the capacity of federal and state agencies to efficiently assess the hazards of chemicals in commercial use and steadily reduce the production and use of those of greatest concern; and (3) motivates investment, education, and research in green chemistry science, technology, and education; and be it further

Resolved, that: The WSPHA supports and encourages its members to support proposed APHA policy to restructure TSCA and implement federal chemical policy reform at the APHA Annual Meeting in November, 2007; and be it further

Resolved, that: The WSPHA supports Washington State’s Department of Health, Department of Ecology and Labor of Industries policy actions, and legislative efforts in Washington State to protect the public,

particularly children and workers, from harmful chemicals in consumer products, to reduce the burden of toxic exposure and improve public health for Washington's citizens.

## International Federation of Gynecology and Obstetrics (FIGO)

### Letter to the European Union from FIGO

EU Commissioner Mr. Vytenis Andriukaitis  
European Commission Directorate General for Health and Food Safety  
B – 1049  
Brussels, Belgium

July 29, 2016

In recognition of the need for a world federation to address the threat of toxic environmental chemicals to human reproductive and developmental health on the global stage, the International Federation of Gynecology and Obstetrics (FIGO) adopted its Opinion, ***Reproductive Health Impacts of Exposure to Toxic Environmental Chemicals***. FIGO is a professional organization that brings together obstetrical and gynaecological associations from around the world, in order to achieve the highest standards of health and wellbeing for women across their lifespan. At the same time, FIGO approved a Working Group, on the topic of Reproductive and Developmental Environmental Health, (RDEH). These experts and scientists devoted to women's health join leading scientists from across the European Union to address concerns about criteria for identification and regulation of Endocrine Disrupting Chemicals (EDCs). FIGO appreciates greatly the wisdom of the European Union and the on respecting the vulnerability of populations such as preconceptual, pregnant and nursing women, the fetus, children, and the underserved, particularly when looking at exposures in the environment.

Exposure to toxic environmental chemicals during pregnancy and breastfeeding is ubiquitous and is a threat to healthy human reproduction. There are tens of thousands of chemicals in global commerce, and even small exposures to toxic chemicals during pregnancy can trigger adverse health consequences. FIGO recommends that reproductive and other health professionals advocate for policies to prevent exposure to toxic environmental chemicals, work to ensure a healthy food system for all, make environmental health part of health care, and champion environmental justice. In recognition that some are more vulnerable to toxic chemicals than others, the US National Academy of Sciences has concluded that in the absence of evidence to the contrary, any level of exposure should be assumed potentially harmful, in other words there is no safe dose.

FIGO joins our colleagues in requesting increased protection from potential Endocrine Disrupting Chemicals. In particular we express the same concern as the Endocrine Society that the criteria are too strict to effectively protect the public from EDS. Expert scientists believe that the burden of proof needs to be such that effective regulation and protection of health is achieved. A just process will consider the balance of research and important role of animal models.

Thank you for your consideration.

Yours sincerely,

Dr CN Purandare  
President, FIGO

Dr Gian Carlo DeRenzo  
Honorary Secretary, FIGO

Dr Linda Giudice  
Obstetrics, Gynecology & Reproductive  
Sciences  
University of California, San Francisco  
550 16TH Street, Floor 7, Box 0132  
San Francisco, CA 94143  
United States of America  
*By e-mail:* [Linda.Giudice@ucsf.edu](mailto:Linda.Giudice@ucsf.edu)

Dr. Jeanne Conry  
Assistant Physician in Chief  
Kaiser Permanente  
1600 Eureka Road  
Roseville, CA 94661  
916-759-7126  
[Jeanne.conry@kp.org](mailto:Jeanne.conry@kp.org)

## **Letter to the FDA from FIGO**

September 16, 2016

Dr. Dennis Keefe  
Director of the Office of Food Additive Safety (HFS-200)  
Center for Food Safety and Applied Nutrition  
5100 Paint Branch Parkway College Park, MD 20740P  
Re: Docket No. FDA-2016-F-1253

Dear Dr. Keefe:

We are writing on behalf of the International Federation of Gynecology and Obstetrics (FIGO) to strongly support the food additive petition requesting that the Food and Drug Administration (FDA) eliminate its approval of 30 ortho-phthalates as food additives in food contact articles. The petition we support was filed by the Natural Resources Defense Council, Center for Science in the Public Interest, Center for Environmental Health, Center for Food Safety, Clean Water Action, Consumer Federation of America, Earthjustice, Environmental Defense Fund, Improving Kids' Environment, and the Learning Disabilities Association of America (See: <https://www.regulations.gov/document?D=FDA-2016-F-1253-0379>). The petition proposes that FDA amend and/or revoke specified regulations to no longer provide for the food contact use of specified ortho-phthalates.

Exposure to toxic environmental chemicals such as phthalates during pregnancy and breastfeeding is ubiquitous and is a threat to healthy human reproduction. Even small exposures to toxic chemicals during pregnancy can trigger adverse health consequences and pregnancy outcomes. FDA has the opportunity to advance women and children's health by eliminating its approval of 30 ortho-phthalates as food additives in food contact articles. Studies have concluded that diet is the primary route of exposure to ortho-phthalates [1, 2]. Exposures to ortho-phthalates during pregnancy are associated with adverse neurodevelopment in children [3-13]. As such, as experts and scientists devoted to women's health, we join leading academic and clinical scientists from across the U.S. to call for action by the FDA to prevent exposure to these toxic chemicals in food contact materials.

FIGO is a professional organization that brings together obstetrical and gynaecological associations from around the world, to achieve the highest standards of health and wellbeing for women across their lifespan. In recognition of the need for a world federation to address the threat of toxic environmental chemicals to human reproductive and developmental health on the global stage, FIGO published its Opinion, Reproductive Health Impacts of Exposure to Toxic Environmental Chemicals in October 2015 (See <http://prhe.ucsf.edu/prhe/healthnottoxics.html>). Shortly thereafter, FIGO approved a Working Group focused on Reproductive and Developmental Environmental Health (RDEH). FIGO explicitly recommends that reproductive and other health professionals advocate for policies to prevent exposure to toxic environmental chemicals, work to ensure a healthy food system for all, make environmental health part of health care, and champion environmental justice. Our support for the food additive petition will advance FIGO's explicit recommendation to "work to ensure a healthy food system for all."

We appreciate the opportunity to provide comments on the food additive petition to amend and/or revoke specific regulations regarding specified ortho-phthalates in food contact materials.  
Thank you for your consideration.

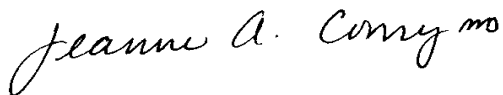
Yours sincerely,

Dr CN Purandare  
President, FIGO

Dr Gian Carlo Di Renzo  
Honorary Secretary, FIGO



Dr. Linda Giudice  
Co-Chair, FIGO Reproductive and Developmental  
Environmental Health Working Group  
Professor of Obstetrics, Gynecology &  
Reproductive Sciences  
University of California, San Francisco  
[Linda.Giudice@ucsf.edu](mailto:Linda.Giudice@ucsf.edu)



Dr. Jeanne Conry  
Co-Chair, FIGO Reproductive and Developmental  
Environmental Health Working Group  
Assistant Physician in Chief  
Kaiser Permanente Obstetrics & Gynecology  
[Jeanne.conry@kp.org](mailto:Jeanne.conry@kp.org)



Tracey J. Woodruff, PhD, MPH  
Member, FIGO Reproductive and Developmental  
Environmental Health Working Group  
Professor and Director  
University of California San Francisco  
Program on Reproductive Health and the Environment  
[Tracey.Woodruff@ucsf.edu](mailto:Tracey.Woodruff@ucsf.edu)

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