

US Environmental Protection Agency: Aging Initiative

EPA's "Aging Initiative," a research program focused on the environmental health of older adults, has increased our understanding of exposure to -- and health effects of -- environmental contaminants on older adults to enhance the Agency's efforts in health promotion and risk assessment.

Lead Agency:

US Environmental Protection Agency

Agency Mission:

The mission of the U.S. Environmental Protection Agency (EPA) is to protect public health and safeguard the natural environment.

Principal Investigator:

Andrew Geller, PhD
Assistant Laboratory Director for Human Health and Computational Toxicology
National Health and Environmental Effects Laboratory
Office of Research and Development
US Environmental Protection Agency
MD B305-02
Research Triangle Park, NC 27711

Partner Agencies:

Environmental and Occupational Health Science Institute
Research Triangle Institute
Hamner Institute
University of Mississippi
University of North Carolina at Chapel Hill

General Description:

EPA's "Aging Initiative," a research program focused on the environmental health of older adults, has increased our understanding of the environmental contaminants to which older adults are exposed and their resulting health effects. The program is identifying key aging-related factors that contribute to variability in environmental exposures and responses to those exposures that could result in adverse health outcomes. By soliciting and incorporating input from individuals in the community, advocacy groups, and scientific experts to derive a creative and comprehensive action plan based on sound science, EPA is helping to enhance and protect the health of aging Americans.

The rapid growth in the number of older Americans has many implications for public health, including the need to better understand the health risks posed by environmental exposures to older adults. Biological capacity declines with normal aging and with diseases of aging. This decline can result in compromised responses to environmental exposures encountered in daily activities, resulting in adverse health outcomes.

In recognition of these factors, and consistent with EPA's mandate to protect the health of vulnerable Americans, EPA developed the "Aging Initiative." This research program is designed to answer the following questions to insure that EPA's regulations and educational outreach programs promote the health of older Americans:

- Where do older adults live and what are the important pollution sources in those locations?
- What activities are older adults engaged in that bring them into contact with these pollutants?
- What happens to those pollutants inside the body?
- What are the critical adverse health effects and adverse outcomes?
- How do we link all of the above for effective risk assessment, management, and communication?

EPA pioneered this research program so that the Agency and its stakeholders will be able to anticipate, accommodate, and manage the environmental risks associated with this inevitable shift in American demographics toward an aging society. The program is generating data, models, and guidance to incorporate the susceptibility of this heterogeneous population into health promotion and intervention strategies to ameliorate risk from environmental exposures.

Excellence: What makes the project exceptional?

EPA's Aging Initiative is exceptional because it solicits and incorporates input from individuals in the community, advocacy groups and scientific experts to derive a creative and comprehensive action plan, based on sound science, to enhance and protect the health of aging Americans.

Significance: How is this research relevant to older persons, populations and/or aging society?

EPA's program to protect the health of older Americans is a unique combination of intra- and extramural research and public outreach. The two efforts have a common goal of identifying the pollutants that are most hazardous to older adults and the reasons why some older adults are more susceptible than others. This information can lead to more informed decisions in setting exposure standards for the public that insures protection of the aging population. The information is also valuable to the community in their efforts to improve environmental quality and minimize the hazards they encounter.

Effectiveness: What is the impact and/or application of this research to older persons?

EPA's Aging Initiative has highlighted the importance of the aging population's vulnerability to pollutants through data generation and publications in peer-review scientific journals, communication with older adult stakeholder groups, and presentation of research findings in scientific conferences.

Innovation: Why is this research exciting or newsworthy?

EPA has mounted a program on susceptibility of the aging population that combines laboratory, clinical, and social research together with public outreach education. This multifaceted program insures that research findings can be quickly and accurately translated into regulatory decisions as well as public awareness and action.