THE CITY OF PROVIDENCE

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

RESOLUTION OF THE CITY COUNCIL

No. 595

Approved November 15, 1991

WHEREAS, The State of Rhode Island has identified "smoking tobacco in any form (as) a public nuisance and dangerous to public health" pursuant to Chapter 23-20.7.1-7 of the Rhode Island General Laws, and

WHEREAS, in the United States, 50 million smokers annually smoke approximately 600 billion cigarettes, 4 billion cigars and the equivalent of 11 billion pipefuls of tobacco, according to the U.S. Environmental Protection Agency, and

WHEREAS, three major bodies were independently convened to consider the public health implications of passive smoking. Commission by the U.S. Public Health Service under the Surgeon General, by the National Research Council (NRC) at the request of EPA, and by the congressionally-mandated Interagency task force on Environmental Cancer, Heart, and Lung Disease, and

WHEREAS, the three separate bodies arrived at a consensus, that passive smoking significantly increases the risk of lung cancer in adults, and

WHEREAS, Surgeon General C. Everett Koop stated that a substantial number of the lung cancer deaths that occur among non-smokers can be attributed to involuntary smoking, and

THEREFORE, LET IT BE RESOLVED, that the Providence City Council determines that smoking is a threat to the health of city workers, city residents and all visitors to city offices, and

LET IT BE FURTHER RESOLVED, that the City Council urges the Mayor, the Director of Administration and the Director of Public Property to take the necessary steps to ban public smoking from all city offices except in designated smoking areas which include ventilation systems that will exhaust the smoke directly to the outside, provide at least 60 cubic feet per minute of outdoor air per smoker; and provide negative pressure to prevent backstreaming of smoke into non-smoking areas,

LET IT BE FURTHER RESOLVED, that designated smoking lounges will be provided with signs, non-combustible ashtrays, and receptacles for smoking materials suitable signs indicating that smoking is prohibited except in designated smoking lounges must be provided at or near the entrances to facilities occupied and controlled by the City of Providence.

LET IT FURTHER BE RESOLVED, that smoking areas may not be designated in the following locations: office space, conference rooms, elevators, corridors, hallways, stairwells, the City Council Chambers, cafeterias or restrooms.

IN CITY COUNCIL
NOV 7 1991
READ AND PASSED
PRES.
CLERK

APPROVED
NOV 15 1991
MAYOR

IN CITY COUNCIL
SEP 5 1991
FIRST READING
REFERRED TO COMMITTEE ON ORDINANCES
Michael R. Clement CLERK

THE COMMITTEE ON
ORDINANCES
Approves Passage of
The Within Resolution, AS AMENDED
Michael R. Clement
~~Chairman~~ Clerk
November 6, 1991

Councilman Fenton and Councilwoman Williams, Councilwoman Young

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

DEPARTMENT OF HEALTH

Barbara A. DeBuono, M.D., M.P.H.
Director of Health

5 November 1991

Councilman Joshua N. Fenton
39 Glendale Avenue
Providence, Rhode Island 02906

Dear Councilman Fenton:

The Rhode Island Department of Health strongly supports the resolution of the Providence City Council to restrict smoking in all City of Providence facilities. Passive cigarette smoke is a major cause of preventable disease. Enactment of this resolution will not only improve the air quality in City facilities, it may save lives.

Employers have an obligation to protect their employees from passive tobacco smoke. This substance causes cancer and heart disease, increases the frequency and severity of respiratory diseases such as bronchitis and asthma, and can harm fetal development.

If you have any questions regarding the health effects of passive smoking, please call the Office of Environmental Health Risk Assessment at 277-3424.

Thank you for this opportunity to comment on the resolution.

Very truly yours,

Barbara DeBuono

Barbara A. DeBuono, MD, MPH
Director of Health

CANNON BUILDING, Three Capitol Hill, Providence, Rhode Island 02908-5097
Telephone 401-277-2231, FAX 277-6548

Testimony

Introduction
Lynn Boulay: credentials

Office: responsible for 23-20.7 (Workplace Smoking Pollution Control Act) and 23-20.6 (Public Places Smoking Law)

Support for the Resolution

1. Breathing passive cigarette smoke is not trivial. Its effects on workers include:
   - Increases risk of lung cancer by 20 to 40%
   - Increases risk of cancers of the larynx, head and neck
   - Increases bronchitis/asthma/etc
   - Increases the risk of heart disease
   - Increases absenteeism
   - Increases accident insurance premiums and health insurance premiums

2. Cigarette smoke has other detrimental effects, e.g., effects on the physical plant, including:
   - More frequent painting/cleaning required
   - Increases in heating costs because of increased ventilation needs
   - Increased costs of operating and maintaining a ventilation system; ducts get dirty
   - Fire hazard

3. Cigarette smoke has effects on visitors to city offices
   - Triggers asthma attacks and respiratory difficulties

4. What if the City does nothing?

   Probably only a matter of time before the city must take such action. OSHA appears to be on the brink of regulations which would trickle down to the municipal sector.

   If a non-smoker wins a liability suit, all employers will be forced to do something.

5. If the City enacts the Resolution, expect the following:
   - decreased costs - saves money in long run (plant maintenance, health care costs)
   - improved morale - City cares about health; 75% of people dont smoke.
   - health is protected
   - office more pleasant, productivity improves

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The New York Times, Tuesday, May 29, 1990

The Evidence Mounts On Passive Smoking

Studies confirm link to damage to heart, blood vessels and lungs.

By LAWRENCE K. ALTMAN

After years of questioning the potential health hazards of secondhand cigarette smoke, a growing number of scientists and health officials are becoming persuaded that the dangers are real, broader than once believed and parallel those of direct smoke.

It has long been established that smoking harms the health of those who do the smoking. Now new epidemiological studies and reviews are strengthening the evidence that it also harms the health of other people nearby who inhale the toxic fumes generated by the smoker, particularly from the burning end of the cigarette. Such indirect, or secondhand, smoking causes death not only by lung cancer, but even more by heart attack, the studies show. The studies on passive smoking, as it is often called, also strengthen the link between parental smoking and respiratory damage in children.

In reports and in interviews, more than a dozen experts said there was little question that passive smoking is an important health hazard.

What has swayed many scientists is a remarkable consistency in findings from different types of studies in several countries with improved methods over those used in the first such studies a few years ago. The new findings confirm and advance two landmark reports in 1986 from the Surgeon General, who concluded that passive smoking caused lung cancer, and from the National Research Council, which said passive smoking is associated with lung cancer.

"The links between passive smoking and health problems are now as solid as any finding in epidemiology," said Dr. Cedric F. Garland, an expert in the epidemiology of smoking at the University of California at San Diego.

This week, the Environmental Protection Agency is expected to release a report concluding that passive smoke causes 3,800 lung cancer deaths each year. The study calls the statistical data firm, not a result of chance, and biologically plausible.

If the E.P.A.'s Scientific Advisory Board agrees with the agency's conclusions, environmental tobacco smoke will be listed as a group A, or very hazardous, carcinogen. Although the E.P.A. has no power to regulate tobacco smoke as an indoor pollutant, the agency's recommendations will strongly influence employers and state and local governments.

The newer understanding of the health hazards of passive smoking were underscored in a report at a world conference on lung health in Boston last week. Dr. Stanton A. Glantz of the University of California at San Francisco estimated that passive smoke killed 50,000 Americans a year, two-thirds of whom died of heart disease.

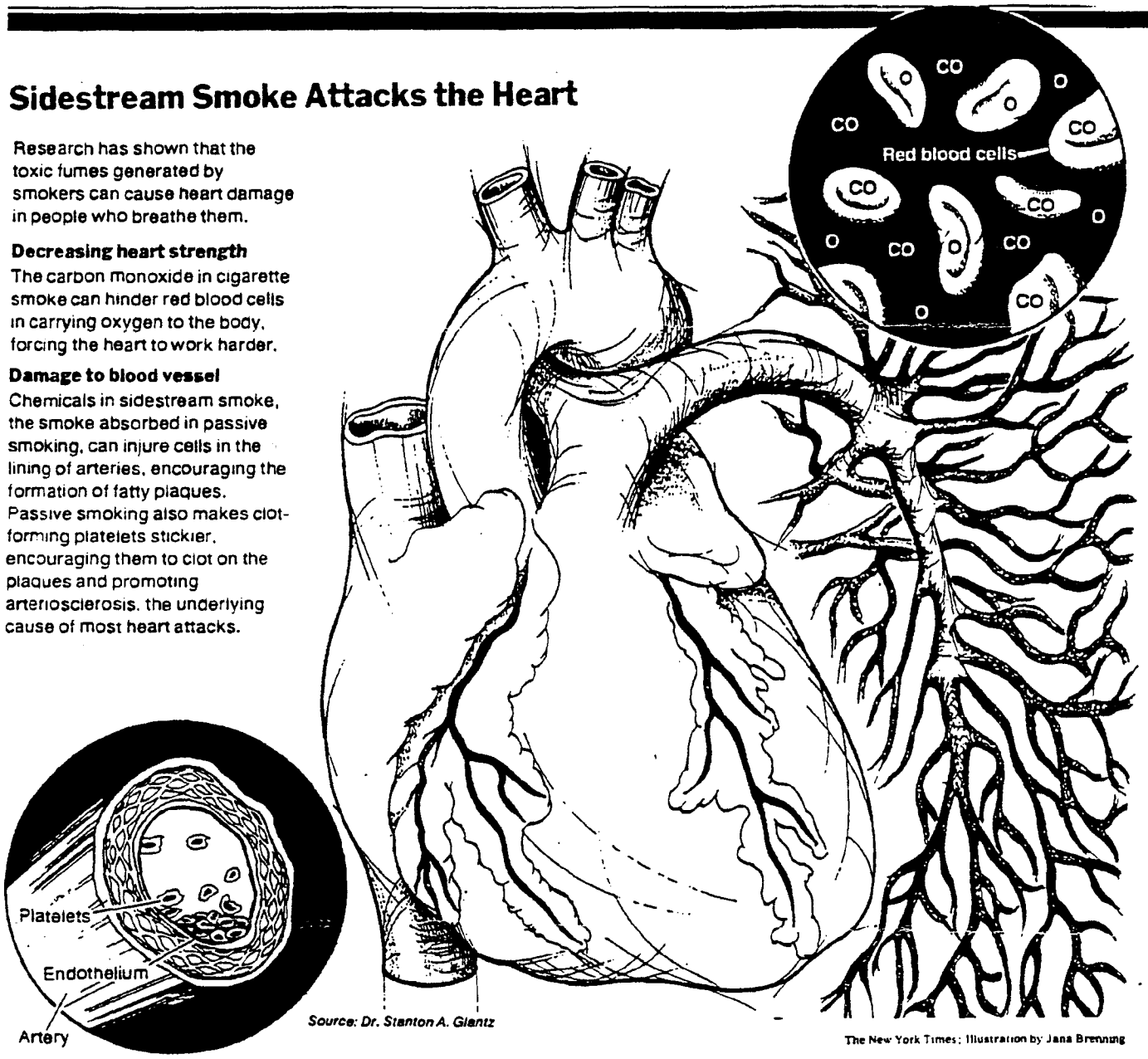
Passive smoking ranks behind direct smoking and alcohol as the third leading preventable cause of death, Dr. Glantz said in what experts called an unusually thorough review of all 11 epidemiological studies published on the subject.

Sidestream Smoke Attacks the Heart

Research has shown that the toxic fumes generated by smokers can cause heart damage in people who breathe them.

Decreasing heart strength
The carbon monoxide in cigarette smoke can hinder red blood cells in carrying oxygen to the body, forcing the heart to work harder.

Damage to blood vessel
Chemicals in sidestream smoke, the smoke absorbed in passive smoking, can injure cells in the lining of arteries, encouraging the formation of fatty plaques. Passive smoking also makes clot-forming platelets stickier, encouraging them to clot on the plaques and promoting arteriosclerosis, the underlying cause of most heart attacks.



Source: Dr. Stanton A. Glantz

The New York Times; Illustration by Jana Brenning

Environmental Protection Agency
Air and Radiation
Washington DC 20460

EPA

Indoor Air Facts No. 3

Ventilation and Air Quality in Offices

BACKGROUND

The air we breathe while at work can affect our job performance, comfort, general sense of well being, and our health. With millions of Americans working in buildings with mechanical heating, ventilation, and air-conditioning (HVAC) systems, their efficiency and effective operation can well determine our indoor air quality. For example, when ventilation is inadequate, excess carbon dioxide produced by people breathing accumulates. Building spaces may become stuffy, and occupants grow drowsy, get headaches, and function at lower activity levels. Other more harmful pollutants from a variety of sources often build up in poorly ventilated work areas and contribute to building-related illnesses.

"SICK BUILDING SYNDROME"

In addition to building-related illnesses which have clearly identifiable causes, improperly designed and operated ventilation systems can also contribute to what is known as "sick building syndrome" or SBS. SBS has physical symptoms without clearly identifiable causes. Some of these symptoms include: dry mucous membranes and eye, nose, and throat irritation. These effects in turn lead to increased absenteeism and reduced work efficiency. The National Institute for Occupational Safety and Health (NIOSH) reports that inadequate ventilation is a cause of many "sick building" cases.

The frequency of "sick buildings" varies by country and by region, but the World Health Organization estimates that up to 30 percent of new or remodelled buildings may have unusually high rates of sick building complaints. While this is often temporary, some buildings become long-term problems which can require extensive investigation and remedial action.

SOURCES OF INDOOR AIR POLLUTION

Indoor air pollution is caused by an accumulation of contaminants that come primarily from inside the building, although some originate outdoors. They may be generated by a specific, limited source or several sources over a wide area, either at certain times or continuously. Common sources of indoor air pollution in commercial buildings include smoking, biological organisms, building materials and furnishings, cleaning agents, office copiers, and pesticides.

CONTROLLING INDOOR AIR POLLUTION

Control of pollutants at the source is an obvious and effective means of protecting indoor air quality and employee health. However, control or mitigation of all sources is not always possible or practical. Adequate natural or mechanical ventilation is, therefore, essential to providing and maintaining good air quality.

In the past, most buildings had windows that opened; "airing out" the indoor space when it became stale or polluted was common practice. In addition, indoor-

outdoor air pressure differences provided additional natural ventilation by infiltration of air through the building shell.

Today most of the newer commercial office buildings are tightly constructed and mechanical ventilation systems are used to exchange polluted indoor air with relatively cleaner outdoor air. When the rates of air exchange are specified by local building codes, they are based primarily on the need to control odors and carbon dioxide levels. Although carbon dioxide is a basic component of outdoor air, its excessive accumulation indoors can indicate poor ventilation. The efficiency of a building's HVAC system and how it is operated and maintained are important to the quality of air in the building.

Concentrations of indoor pollutants are generally directly proportional to the number of sources in a space and their source strength. For example, if two cigarettes instead of one are smoked in an office, twice as much smoke accumulates in the office air.

Indoor air pollution in buildings usually is inversely proportional to the rate at which indoor air is exchanged with outdoor air. If the air exchange rate is tripled and distributed uniformly, in general only a third as much pollution accumulates, and the time for a given amount of pollutant to be cleared will be diminished proportionately.

Air <u>supply</u> rates rather than air <u>exchange</u> rates are usually specified by building codes. Air supply rates are commonly expressed in units of cubic-feet-per-minute per person (cfm/person). In 1981, the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) published its "Standard 62: Ventilation for Acceptable Indoor Air Quality." This voluntary standard specified recommended air-supply rates that were based on providing ventilation to satisfy 80 percent of building occupants. ASHRAE specified 5 cfm/person in non-smoking buildings, and 20 cfm/person in buildings where smoking was allowed. ASHRAE is now considering changing its minimum air-supply rate to 15 cfm/person for all buildings.

In general, increasing the ventilation rate lessens indoor air quality problems in a poorly ventilated building. But even in a well-ventilated building, there may be unusually strong pollutant sources or stagnant zones which impair good indoor air quality. The closer such a source is to an exhaust, the more effective the ventilation. "Spot" exhaust ventilation, like a chemical fume hood, is the most effective. For example, if copier rooms or areas where solvents are used were served by separate exhaust systems, less overall building exhaust ventilation would be required.

COMMON VENTILATION PROBLEMS AND SOLUTIONS

Properly designed, installed, operated, and maintained HVAC systems promote indoor air quality. Poor design, installation, operation, or maintenance of HVAC systems, on the other hand, can create indoor air quality problems. Some common HVAC problems and solutions include:

- **Inadequate makeup air**
  To dilute and displace indoor contaminants, ventilation systems must bring in adequate amounts of fresh outdoor air. However,

About 400,000 Americans die from breathing their own smoke each year, the Surgeon General's 1989 report said. About 100,000 die from alcohol, according to a report in 1987 from the National Institute on Alcohol Abuse and Alcoholism.

Donald Shopland of the National Cancer Institute, who has helped prepare the Surgeon General's reports on smoking since 1964, said "there's no question" now that passive smoking is also a cause of heart disease.

The evidence for the health hazards of passive smoking is largely statistical and epidemiological, techniques that have often pointed the way for scientists to confirm the findings from laboratory research.

At last week's meeting, Dr. Mark L. Witten of the University of Arizona reported what he said was the first documented damage to animals from passive smoking. In experiments begun when he was at the Massachusetts General Hospital in Boston, Dr. Witten exposed rabbits to sidestream smoke for 15 minutes a day for 20 days in amounts comparable to those received by children of smoking parents.

Damage to Animals' Lungs

The animals developed lung damage resembling an asthmatic reaction. Cells in the airways of the rabbits degenerated and their lungs became more permeable, posing a significant risk for the development of serious lung disease by creating an easier entry point for microbes, pollutants and toxins.

The new findings on passive smoking parallel recent changes in laws and rules that limit smoking in public places. In recent years, all but four states (Missouri, North Carolina, Tennessee and Wyoming) have passed comprehensive laws limiting smoking in places like restaurants, schools, stores, hospitals and theaters, according to Action for Smoking and Health, an advocacy group. In February, airlines banned smoking on all flights of less than six hours.

Only a decade ago many scientists were skeptical over the initial links between passive smoking and lung cancer.

Dr. Garland, the San Diego expert, said: "We were out on a limb when we started, but now we have the kind of replication one would want to see play a role in public policy."

But Walker Merryman, a spokesman for the Tobacco Institute, a trade group, disputed the conclusions, citing reports from a conference last November at McGill University in Montreal that was partly sponsored by the tobacco industry.

Dr. Joseph M. Wu, a biochemist at New York Medical College in Valhalla, said in his concluding remarks at the meeting that the published data "are inconsistent with the notion that environmental tobacco smoke is a health hazard."

He also said, "It appears premature to take any sort of regulatory action with regard to environmental tobacco smoke at this point."

Cigarette smoke consists of more than 4,700 compounds, including 43 carcinogens, the E.P.A. says. Major differences exist in the components of mainstream and sidestream smoke that largely reflect the degree of combustion. Mainstream smoke is inhaled from smoking and consists of large particles deposited in the larger airways of lung.

Sidestream smoke is generated from the burning end of cigarettes, cigars and pipes during the smoldering between puffs. Sidestream smoke

A decade ago, many experts were skeptical. Not any more.

may come from someone else's tobacco or from one's own, and is the major source of environmental tobacco smoke. Sidestream smoke is a mixture of irritating gases and carcinogenic tar particles that reach deeper into the lungs because they are small.

Scientists say that because of incomplete combustion from the lower temperatures of a smoldering cigarette, sidestream smoke is dirtier and chemically different from mainstream smoke.

Dr. Henry D. McIntosh, a former president of the American College of Cardiology, said he agreed with Dr. Glantz's review that found a 30 percent increase in risk of death from heart attacks among nonsmokers living with smokers. The risk correlated with the amount of the spouse's smoking; the heavier a smoker, the greater the risk.

Researchers have found that passive smoking makes platelets, the tiny fragments in the blood that help it clot, stickier. The findings were made on 10 healthy nonsmokers who sat for 20 minutes in an open hospital corridor beside smokers.

Platelets can form clots on plaques in fat-clogged arteries to cause heart attacks, and they may also play a role in promoting arteriosclerosis, the underlying cause of most heart attacks.

Researchers have also shown from animal and human studies that chemicals in side-stream smoke may injure cells on the inside lining of the arteries and thus promote development of plaque and arteriosclerosis.

Dr. Glantz's review, which was done in collaboration with Dr. William W. Parmley, chief of cardiology at the University of California at San Francisco and a former president of the American College of Cardiology, highlighted the interplay between such processes. Although platelets do not normally stick to the inside lining of arteries, such sticking is easier when cells in the lining have been damaged. Under such conditions, the platelets can release substances that cause further damage to the artery.

Researchers have also shown that passive smoking adversely affects heart function, decreasing the ability of people with and without heart disease to exercise. "You don't get oxygen to the heart as well," Dr. Glantz said.

Passive smoking increases the demands on the heart during exercise and reduces the heart's capacity to speed up. For people with heart disease, the decreased function can precipitate the chest pains from angina.

The decreased heart function may reflect impeded enzyme activity within cells, an effect that has been documented with passive smoke in animals, Dr. Glantz said.

Blood tests of adolescent children whose parents smoked showed changes that increase their risk of heart disease, according to studies by Dr. William B. Moskowitz's team at the Medical College of Virginia in Richmond. The children, exposed to passive smoke since birth, had increased amounts of cholesterol and lower levels of HDL, a protein in blood that is believed to protect against heart attacks. The researchers found that the greater the exposure to passive smoke, the greater were the biochemical changes.

Terrence McCarthy for The New York Times

Dr. Stanton A. Glantz in cardiology research lab at University of California at San Francisco where he studied effects of passive smoking, which he said ranks as the third leadingpreventable cause of death in the U.S.

The effects of passive smoking on heart disease were not part of the E.P.A. study, which relied on the agency's carcinogenic assessment guidelines to evaluate lung cancer and respiratory illness.

The E.P.A. reviewed 24 epidemiological studies of passive smoking and lung cancer, 11 more than in the Surgeon General's report in 1986. The newer studies confirm those in the first 13 studies. "The evidence is remarkably consistent, even with different methods, and is persuasive," said one E.P.A. official who asked not to be identified.

A pioneering report linking passive smoking and lung cancer came in 1981 from a 14-year Japanese study by Dr. Takeshi Hirayama. His research methods were criticized at first, but critical review, corrections and revisions have "failed to discredit the findings," a draft of the E.P.A. report said.

Lawrence Garfinkel, an epidemiologist who is vice president of the American Cancer Society, said that he was at first skeptical of Dr. Hirayama's report but that he was convinced from later studies, including his own, that there was about a 30 percent increased risk of developing lung cancer from passive smoking. Mr. Garfinkel said a study of 1.2 million Americans now being completed should help clarify the degree of risk from all types of cancer and other diseases when the results are analyzed this year.

Other Types of Cancer

Dr. Glantz estimated that one-third of the 50,000 deaths from passive smoking were from cancer. In addition to lung cancer, researchers have linked cancer of the cervix to both mainstream and sidestream smoke.

Mainstream smoke, but not sidestream, has been linked to cancers of the mouth, throat, voice box, esophagus, urinary bladder, kidney and pancreas.

Sidestream smoke, but not mainstream smoke, has been linked to cancers of the brain, thyroid, and breast. Several groups are trying to do other studies to determine whether such findings are spurious and whether sidestream smoke can cause cancers not caused by mainstream smoke.

The American Academy of Pediatrics estimates that 9 million to 12 million American children under the age of 5 may be exposed to passive smoke.

The E.P.A. focused on the nearly 30 epidemiologic studies on passive smoking and respiratory disorders published since the 1986 reports.

The newer studies strengthed earlier conclusions that passive smoke increases the risk for serious early childhood respiratory illness, particularly bronchitis and pneumonia in infancy. Increased coughing was reported from birth to the mid-teen-age years among 13 newer studies of passive smoking and respiratory symptoms.

Researchers say that young children may develop symptoms after exposure to passive smoke for only a few months. The E.P.A. said passive smoke may be a particular problem because of an infant's immature immunologic and respiratory systems.

The E.P.A. also found that passive smoke can lead to to middle ear infections and other conditions in young children. The agency has said that asthmatic children are particularly at risk and that lung problems as children can extend to adulthood.

leaks resulting in standing water anywhere in the HVAC system may foster harmful biological growths that can be distributed throughout the building.

VENTILATION STANDARDS AND BUILDING CODES

As discussed earlier, in 1981 ASHRAE published a voluntary industry consensus ventilation standard for acceptable indoor air quality. However, most building codes refer to an earlier version of this standard which was intended to conserve energy rather than promote indoor air quality. That is, many current building codes provide for less ventilation than is now believed required to maintain indoor air quality. And all too often, even these minimal air exchange rates are not enforced. Lack of adequate ventilation rates in building codes and lack of local-level enforcement of existing ventilation rates in many instances also contribute to poor indoor air quality.

AIR CLEANERS

While air cleaners are an important part of an HVAC system, and can be used to filter both particles and gasses, they are not substitutes for adequate ventilation. Air cleaners work best when they have a high filter efficiency and are designed to handle large amounts of air.

Ordinary low-efficiency dust filters are not very effective at removing fine particles such as those in tobacco smoke. High-efficiency air cleaners such as electrostatic precipitators and high-efficiency performance air (HEPA) filters are effective in removing even fine particulate matter, but are more expensive to purchase and operate. All filters require proper maintenance to avoid releasing organic vapors trapped on particulate matter (e.g., tobacco smoke) and biological aerosols, and in the case of electrostatic precipitators, ozone.

Particulate filters are generally ineffective, however, in removing gaseous pollutants. Activated charcoal and other materials can filter some gaseous pollutants (and particulates); however, these systems are expensive and require frequent replacement of the filter material.

RESOLVING AIR QUALITY PROBLEMS IN OFFICE BUILDINGS

Building managers and tenants should work together to improve air quality in office buildings. Areas to address include:

- The general operation and maintenance of the ventilation system and any specific problems observed.
- The nature and number of occupant complaints concerning the indoor air environment.
- Ventilation standards in use; adherence to applicable codes.
- Non-essential tenant practices which may restrict effective operation of the system, e.g., furniture placement, blocking vents, partition changes.
- Restrictions on smoking.
- Identification of pollution sources used by either building management or occupants that may call for steps to remove the source or provide special ventilation techniques.
- Increasing ventilation rates during periods of increased pollution, e.g., painting,

because it is costly to heat cold outdoor air in winter and cool hot and humid outdoor air in summer, some building owners and managers greatly reduce ventilation rates--even to zero--during hot and cold spells, causing contaminated air to accumulate inside. In other words, when there is little or no air exchange with the outdoors, a building is poorly ventilated, and indoor air pollution increases. Therefore, provision of adequate makeup air should be ensured at all times.

- **Inadequate design or installation**

Intermittent air flow: Designs that operate the HVAC system at reduced or interrupted flow during certain portions of the day in response to thermal conditioning needs (as is common in many "variable air volume" installations) may elevate indoor contaminant levels by reducing air flow and mixing, thus impairing contaminant removal efficiency. Therefore, minimum ventilation rates should be determined by thermal conditioning or ventilation requirements, whichever is greater.

Poor air distribution: Failure to maintain proper temperature, humidity, and air movement can lead office occupants to block supply registers that are too cold or too hot. This disrupts normal air flow patterns. Within a room, locating air supply and return registers too close to each other can result in poor distribution of fresh dilution air and poor removal of indoor contaminants. Finally, placing partitions or other barriers to air movement within a space can also impair air distribution. Therefore, precautions must be taken to maintain proper thermal conditions, properly locate supply and return registers, and properly locate furniture and partitions.

Poor intake or exhaust location: Building exhaust ducts and outside air intakes that are too close to each other can result in the re-entry of contaminated exhaust air into the building and a build-up of indoor pollution. Location of air intakes near outdoor sources of pollution such as loading docks, heavy traffic, chimneys, trash depots, etc., also makes it easy to introduce contaminants into a building's ventilation system. Therefore, outside air intakes should be carefully located.

- **Inadequate operation**

Allowing the system operation to lag behind building occupancy or to be turned down or off before non-occupancy can increase both building- and occupant-generated pollutant levels. Similarly, turning the system off both at night and on weekends allows building-generated pollutants to accumulate when the building is empty. Therefore, the ventilation system should be turned on several hours before people come to work, and system shutdown should not occur prior to their going home.

- **Inadequate maintenance**

HVAC systems must be properly maintained to promote rather than impair indoor air quality. If this is not done, ventilation system filters can become a source of contamination or become plugged and reduce air flow. Also, both humidification and dehumidification systems must be kept clean to prevent the growth of harmful bacteria and fungi. Failure to properly treat cooling tower water to prevent growth of organisms such as legionnella may introduce such biological organisms into HVAC air intakes with potentially serious health consequences. Condensation or

renovation, pesticide use; scheduling of the use of pollutant sources to minimize the impact on indoor air quality.

- Balancing energy conservation with indoor air quality considerations and employee health and productivity costs.

- Frequency and benefits of regular inspection of the ventilating system.

- Identification of areas for follow-up.

SUMMARY

- It is essential to bring fresh outdoor air into buildings to dilute indoor pollutants.

- A well-designed, maintained, and operated ventilation system is essential to provide good indoor air quality in office buildings.

- Poor indoor air quality contributes to worker discomfort and poor performance. In the absence of adequate ventilation, irritating or harmful contaminants can build up, possibly affecting individuals' health.

- An improperly maintained HVAC system can itself generate health-threatening pollutants.

- Air cleaning is an important part of an HVAC system, but is not a substitute for ventilation. Particulate and gaseous filters must be properly maintained to be effective.

- Ventilation rates specified in local building codes are often not enforced and in many jurisdictions the rates are designed to conserve energy rather than promote indoor air quality.

- Energy costs should be balanced with indoor air quality considerations and employee health and productivity costs.

FOR FURTHER INFORMATION

For further information on indoor air pollution, contact your state or local health departments, non-profit agencies such as your local American Lung Association, or the following:

Division of Respiratory
  Disease Studies
National Institute for
  Occupational Safety and Health
944 Chestnut Ridge Road
Morgantown, WV 26505

Office of Building and
  Community Systems
U.S. Department of Energy
  CE-13, MS GH-068
1000 Independence Avenue SW.
Washington, DC 20585

Public Relations Office
American Society of Heating,
  Refrigerating, and
  Air-Conditioning Engineers
  (ASHRAE)
1791 Tullie Circle NE.
Atlanta, GA 30329

Building Owners and Managers
  Association International
1250 Eye Street NW.
Washington, DC 20005

Additional copies of this Fact Sheet and others in the Indoor Air series are available from:

Public Information Center
U.S. Environmental
  Protection Agency
Mail Code PM-211B
401 M Street SW.
Washington, DC 20460

United States Environmental Protection Agency

Office of Air and Radiation (ANR-445)

June 1989

EPA

Indoor Air Facts No. 5

Environmental Tobacco Smoke

Environmental Tobacco Smoke (ETS) is one of the most widespread and harmful indoor air pollutants. ETS comes from secondhand smoke exhaled by smokers and sidestream smoke emitted from the burning end of cigarettes, cigars, and pipes. ETS is a mixture of irritating gases and carcinogenic tar particles. It is a known cause of lung cancer and respiratory symptoms, and has been linked to heart disease. Breathing in ETS is also known as "involuntary" or "passive" smoking.

What's The Big Deal About A Little Smoke?

In the United States, 50 million smokers annually smoke approximately 600 billion cigarettes, 4 billion cigars, and the equivalent of 11 billion pipesful of tobacco. Since people spend approximately 90 percent of their time indoors, this means that about 467,000 tons of tobacco are burned indoors each year. Over a 16-hour day, the average smoker smokes about two cigarettes per hour, and takes about ten minutes per cigarette. Thus, it takes only a few smokers in a given space to release a more-or-less steady stream of ETS into the indoor air.

In 1985, three major bodies were independently convened to consider the public health implications of passive smoking. Commissioned by the U.S. Public Health Service under the Surgeon General, by the National Research Council (NRC) at the request of EPA, and by the congressionally-mandated Interagency Task Force on Environmental Cancer, Heart, and Lung Disease, the three bodies arrived at a consensus: passive smoking significantly increases the risk of lung cancer in adults. In the words of the Surgeon General, "**a substantial number of the lung cancer deaths that occur among nonsmokers can be attributed to involuntary smoking.**" Moreover, there was agreement that passive smoking substantially increases respiratory illness in children and the NRC recommended eliminating ETS from the environments of small children.

Why ETS Is Harmful

Because the organic material in tobacco doesn't burn completely, cigarette smoke contains more than 4,700 chemical compounds, including: carbon monoxide, nicotine, carcinogenic tars, sulfur dioxide, ammonia, nitrogen oxides, vinyl chloride, hydrogen cyanide, formaldehyde, radionuclides, benzene, and arsenic. These chemicals have been shown in animal studies to be highly toxic. Many are treated as hazardous when emitted into outdoor air by toxic-waste dumps and chemical plants.

There are 43 carcinogenic compounds in tobacco smoke. In addition, some substances are mutagenic, which means they can cause permanent, often harmful, changes in the genetic material of cells. EPA research has shown that ETS is the major source of mutagens indoors when smoking occurs. Higher levels of mutagenic particles are found in homes with ETS than in homes with wood stoves or in outdoor urban environments with numerous diesel trucks and buses.

Many studies have shown that nonsmokers absorb ETS components in their body fluids. The effect of ETS on nonsmokers depends on the duration of exposure. According to the National Research Council, short-term visitors to a smoking area are most likely to be annoyed by the tobacco smoke odors, whereas nonsmoking occupants of the area are more likely to complain about irritating effects to the eyes, nose or throat. Long-term exposure to ETS may lead to more serious health effects.

Impact On Children

Passive smoking induces serious respiratory symptoms in children. Wheezing, coughing and sputum production among children of smoking parents increase by 20 percent to 80 percent depending on the symptom being assessed and the number of smokers in the household. Asthmatic children are particularly at risk.

Children of smokers have significantly higher rates of hospitalization for bronchitis and pneumonia, and a number of studies report that chronic ear infections are more common in young children whose parents smoke. Also lung development is slower in children exposed to ETS. Lung problems caused by ETS exposure in childhood can extend into adult life.

ETS And Cancer

The U.S. Surgeon General and the NRC agree that ETS can cause cancer. The NRC estimates that the risk of lung cancer is roughly 30 percent higher for nonsmoking spouses of smokers than for nonsmoking spouses of nonsmokers. In 1986, an estimated 23,000 U.S. nonsmokers died from lung cancer, and the Surgeon General attributes a substantial number of those deaths to passive smoking.

ETS And Heart Disease

The Interagency Task Force on Environmental Cancer, Heart, and Lung Disease Workshop on ETS concluded that the effects of ETS on the heart may be of even greater concern than its cancer-causing effects on the lungs. ETS aggravates the condition of people with heart disease, and several studies have linked involuntary smoking with heart disease.

ETS's Contribution To Indoor Air Pollution

There are many potential sources of indoor air pollution, including chemicals emanating from building materials, furnishings, and consumer products; gases from combustion appliances like space heaters and furnaces; and biological contaminants from a variety of sources. Because cigarettes, pipes, and cigars produce clouds of tar particles when smoked, ETS is a major contributor of particulate indoor air pollution. ETS also contributes numerous toxic gases to indoor air, including carbon monoxide, formaldehyde and ammonia.

Field studies, controlled experiments, and mathematical models show that, under typical conditions of smoking and ventilation, ETS diffuses rapidly throughout buildings and homes, persists for long periods after smoking ends, and represents one of the strongest sources of indoor-air particulate pollution in buildings where smoking is permitted. Studies of indoor air quality in commercial and public buildings show that particulate levels in areas where smoking is permitted are considerably higher than in nonsmoking areas. Studies using personal air monitors have shown that a single smoker in a home can double the amount of particulate air pollution inhaled by nonsmoking members of the household.

Evidence Of Nonsmoker Exposure

Nicotine, a chemical unique to tobacco, has been found to be a widespread air contaminant in buildings where smoking occurs. Nicotine breaks down into cotinine as it passes through the body. Cotinine can be detected and measured in the saliva, blood, and urine of nonsmokers, indicating they have absorbed tobacco smoke from the air. Concentrations of cotinine have been found in the body fluids of infants of smoking parents, and of adults who were unaware they had been exposed to ETS.

Removal Of ETS From Indoor Air

Environmental tobacco smoke can be totally removed from the indoor air only by removing the source (cigarette smoking). Separating smokers and nonsmokers in the same room may reduce, but will not eliminate, nonsmokers' exposure to tobacco smoke. Placing smokers and non-smokers in separate rooms that are on the same ventilation system also may reduce nonsmokers' exposure to tobacco smoke; this approach, however, will probably not eliminate exposure to tobacco smoke since most pollutants readily disperse through a common air space and since, in public or commercial buildings, most HVAC systems recirculate much of the contaminated indoor air.

In 1981, the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), in its standard "Ventilation for Acceptable Indoor Air Quality" recommended five cubic feet of outside air per minute per occupant (cfm/occ) in smoke-free office buildings and 20 cfm/occ in buildings where smoking is permitted. These recommendations were not designed to reduce health risks (for example, limiting cancer incidence or eye irritation); rather, the recommendations were intended to control the *odor* from tobacco smoke so that 80 percent of visitors (smokers and nonsmokers combined) to the building find it acceptable. A proposed revision of this standard recommends a minimum of 15 cfm/occ in all buildings.

Research indicates that total removal of tobacco smoke through ventilation is both technically and economically impractical. The effectiveness of air filters for removing ETS particles from the indoor air is generally dependent on the type and efficiency of the air cleaner used; the effectiveness of air cleaners in removing the gaseous components of

tobacco smoke and other air pollutants requires further research.

Since there is no established, health-based threshold for exposure to environmental tobacco smoke and since EPA generally does not recognize a no-effect or safe level for cancer causing agents, the Agency recommends that exposure to environmental tobacco smoke be minimized wherever possible. The most effective way to minimize exposure is to restrict smoking to smoking areas that are separately ventilated and directly exhausted to the outside, or by eliminating smoking in the building entirely.

The Public Reaction To ETS

People are becoming increasingly sensitized to the issue of ETS. Numerous surveys have documented that the majority of both smokers and nonsmokers support restrictions on smoking in public, particularly in the workplace. In a 1987 Gallup National Opinion Survey, 55 percent of all persons interviewed (including smokers and nonsmokers) were in favor of a total ban on all smoking in public places.

As a result, thousands of businesses and hundreds of cities, as well as over 40 states and the District of Columbia restrict smoking in various settings. The number continues to grow rapidly.

Conclusion

EPA shares the recommendations of the 1986 Surgeon General's Report:

- Adults should protect the health of children by not exposing them to environmental tobacco smoke.
- Employers and employees should ensure that the act of smoking does not expose nonsmokers to environmental tobacco smoke by restricting smoking to separately ventilated areas or banning smoking from buildings.
- Smokers should ensure that their behavior does not jeopardize the health of others.
- Nonsmokers should support smokers who are trying to quit.

For More Information

For additional information on environmental tobacco smoke, contact your state or local health departments, nonprofit agencies such as your local Lung Association, Cancer Society or Heart Association, or the following:

Office on Smoking and Health
U.S. Public Health Service
5600 Fishers Lane, Room 1-10
Rockville, MD 20857

Public Relations Office
American Society of Heating
Refrigerating and Air Conditioning
Engineers (ASHRAE)
1791 Tullie Circle, NE.
Atlanta, GA 30329

Office of Cancer Communications
National Cancer Institute
1-800-4-CANCER

Smoking Policy Institute
914 East Jefferson
Suite 219
P.O. Box 20271
Seattle, WA 98102

Americans for Nonsmokers' Rights
2054 University Avenue
Suite 500
Berkeley, CA 94704

Action on Smoking and Health
2013 H Street, NW.
Washington, DC 20006

Cigarette smoke is only one of many indoor air pollutants that can affect your health and comfort. Other EPA publications concerning the quality of indoor air include:

- *The Inside Story: A Guide to Indoor Air Quality*
- *Directory of State Indoor Air Contacts*
- *Indoor Air Facts #1: EPA and Indoor Air Quality*
- *Indoor Air Facts #2: EPA Indoor Air Quality Implementation Plan*
- *Indoor Air Facts #3: Ventilation and Air Quality in Offices*
- *Indoor Air Facts #4: Sick Buildings*

These publications, as well as additional copies of this fact sheet, are available from:

Public Information Center
U.S. Environmental Protection Agency
Mail Code PM-211B
401 M Street, SW.
Washington, DC 20460

United States Environmental Protection Agency | Radiation (ANR-445) | February 1990

EPA

Indoor Air Facts No. 7

Residential Air Cleaners

Air Cleaning

Air cleaning is one of three methods of reducing pollutants in indoor air. In order of effectiveness, the three methods are: 1) removal of the source or control of its emissions, 2)ventilation, and 3) air cleaning. Air cleaning can be used as an adjunct to source control and ventilation. However, air cleaning alone cannot adequately remove all of the pollutants typically found in indoor air.

Should You Use An Air Cleaner?

Many factors need to be considered in determining whether use of an air cleaner is appropriate in a particular setting. Therefore, the decision whether or not to use an air cleaner is left to the individual. **EPA has not taken a position either for or against the use of these devices in the home.**

Will Air Cleaning Reduce Health Effects?

Air cleaners may reduce the health effects from some **particles** - small solid or liquid substances suspended in air, such as dust or light spray mists.

- Some air cleaners, under the right conditions, can effectively remove certain respirable-size particles (for example, tobacco smoke particles). These invisible particles are of concern because they can be inhaled deeply into the lungs. Removing such particles may reduce associated health effects in exposed people. These effects may range from eye and lung irritation to more serious effects such as cancer and decreased lung function.

- Some controversy exists about whether air cleaners can reduce the allergic reactions produced by larger particles such as pollen, house dust allergens, some molds, and animal dander. Most of these particles are found where they settle on surfaces in the home, rather than in the air. They cannot be removed by an air cleaner unless disturbed and resuspended in the air.

Air cleaners that do not contain special media, such as activated carbon or alumina, will not remove **gaseous pollutants**, including **radon**, or reduce their associated health effects. Whether air cleaners that contain these media are effective in reducing health risks from gaseous pollutants cannot be adequately assessed at this time. In addition, the effectiveness of air cleaners in reducing the health risks from **radon progeny** (decay products) cannot be adequately evaluated at present. ***The removal of gaseous pollutants and radon and its progeny is not addressed further in this fact sheet. Health effects from these pollutants may be serious, however, and they are of concern in indoor air.***

Types Of Air Cleaners

Some air cleaners may be installed in the ducts which are part of central heating or air-conditioning systems in homes. Portable air cleaners stand alone in a room.

Types of air cleaners include:

- **Mechanical filters**, similar to, and including, the typical furnace filter.
- **Electronic air cleaners** (for example, electrostatic precipitators) which trap charged particles using an electrical field.
- **Ion generators** which act by charging the particles in a room. The charged particles are then attracted to walls, floors, draperies, etc. or a charged collector.
- **"Hybrid" devices**, which contain two or more of the particle removal devices discussed above.

Assessing Potential Performance

At a minimum, you should consider the following major factors affecting the performance of the air cleaner:

- The percentage of the particles removed as they go through the device (that is, the efficiency).
- The amount of air handled by the device. For example, an air cleaner may have a high efficiency filter, but it may process only 10 cubic feet of air each minute. Suppose that the air cleaner is put in a room of typical size, containing 1000 cubic feet of air. In this room, it will take a long time for all the air to be processed. In some cases, pollutants may be generated more quickly than they are removed.
- The effective volume of the air to be cleaned. A single portable unit used in a room within a large building in which the air flows between several apartments or offices would be of little or no value.
- The decrease in performance which may occur between maintenance periods and if periodic maintenance is not performed on schedule.

Additional Factors To Consider

- Ion generators and electronic air cleaners may produce ozone, particularly if they are not properly installed and maintained. Ozone can be a lung irritant.
- Gases and odors from particles collected by the devices may be redispersed into the air.
- The odor of tobacco smoke is largely due to gases in the smoke, rather than particles. Thus, you may smell a tobacco odor even when the smoke particles have been removed.
- Some devices scent the air to mask odors, which may lead you to believe that the odor-causing pollutants have been removed.
- Ion generators, especially those that do not contain a collector, may cause soiling of walls and other surfaces.
- You may be bothered by noise from portable air cleaners, even at low speeds.
- Maintenance costs, such as costs for the replacement of filters, may be significant. You should consider these costs in addition to the initial cost of purchase. In general, the most effective units are also the most costly.

Obtaining Adequate Performance

Proper installation, use, and care. Follow the manufacturer's directions to assure that the air cleaner works properly. To avoid any electrical or mechanical hazards, be sure the unit is listed with Underwriters Laboratories (UL) or another recognized independent safety testing laboratory.

Perform routine maintenance, as required. Generally speaking, air cleaners require frequent cleaning and filter replacement to function properly.

Proper placement. Place **portable air cleaners** so:

- They are near a specific pollutant source, if one exists.
- They force the cleaned air into occupied areas.
- The inlet and outlet are not blocked by walls, furniture, or other obstructions.

For **in-duct devices**, assure that the inlets and outlets of the heating or cooling system are not blocked by furniture and other obstructions.

Comparing Air Cleaners

One common method of rating high efficiency filters uses a procedure in Military Standard 282. This procedure measures how well small particles of a specific chemical are removed by the filter.

The Federal government has not published guidelines or standards that can be used to determine how well low to medium efficiency air cleaners work. However, standards have been developed by private standard-setting trade associations. These standards may be useful in comparing air cleaners.

For further information on standards for **in-duct air cleaners,** contact your local heating or air-conditioning contractor or:

Air-Conditioning and Refrigeration
Institute (ARI)
1501 Wilson Blvd., 6th Floor
Arlington, VA 22209

For further information on standards for **portable air cleaners**, send a stamped, self-addressed envelope to:

Association of Home Appliance
Manufacturers (AHAM)
Air Cleaner Certification Program
20 North Wacker Drive
Chicago, IL 60606

Additional Information

You can find a more in-depth analysis of air cleaners in the EPA document *Residential Air-Cleaning Devices: A Summary of Available Information*. For this document and other EPA indoor air publications, contact:

Public Information Center
U.S. Environmental Protection Agency
Mail Code PM-211B
401 M St., SW
Washington, DC 20460

TESTIMONY IN SUPPORT OF THE BAN ON PUBLIC SMOKING

MY NAME IS DR. CAROL EWING GARBER I AM A VOLUNTEER WITH THE RHODE ISLAND AFFILIATE OF THE AMERICAN HEART ASSOCIATION AND HAVE BEEN A RESIDENT OF THE CITY OF PROVIDENCE SINCE 1977. I AM HERE TO URGE YOU TO SUPPORT THE RESOLUTION INTRODUCED BY COUNCILMAN FENTON WHICH WOULD BAN PUBLIC SMOKING IN ALL PUBLIC BUILDINGS IN THE CITY OF PROVIDENCE. ACTION ON THIS RESOLUTION IS VITAL TO THE HEALTH OF CITY WORKERS AND THE PUBLIC WHO ENTER CITY BUILDINGS.

THE RESOLUTION BEFORE YOU MENTIONS THAT SMOKING AND BREATHING SECOND HAND SMOKE CAN RESULT IN LUNG CANCER. WHAT MANY OF YOU MAY NOT KNOW IS THAT THE HEALTH RISKS OF SMOKING AND SECOND-HAND SMOKE ARE MUCH MORE FAR-REACHING. CIGARETTE SMOKING AND PASSIVE SMOKING BOTH HAVE BEEN DIRECTLY LINKED TO THE DEVELOPMENT OF HEART DISEASE AND PULMONARY DISEASES SUCH AS EMPHYSEMA AND BRONCHITIS.

OVER 4,000 SUBSTANCES ARE PRESENT IN CIGARETTE SMOKE AND MANY OF THESE SUBSTANCES INJURE THE WALLS OF THE BLOOD VESSELS WHICH SUPPLY BLOOD AND OXYGEN TO THE HEART AND OTHER PARTS OF THE BODY. OVER TIME, EXPOSURE TO THESE SUBSTANCES RESULT IN THE DEVELOPMENT OF PLAQUE ON THE WALLS OF THE BLOOD VESSELS AND FINALLY A HEART ATTACK, ANGINA PECTORIS OR STROKE.

PROFESSIONALLY, I SEE THE RAVAGES OF SMOKING EVERY DAY IN MY WORK WITH HEART PATIENTS AT THE MEMORIAL HOSPITAL OF RHODE ISLAND. PERSONALLY, MY EXPERIENCES HAVE BEEN MUCH

MORE DEVASTATING ; SEVERAL OF MY FAMILY MEMBERS HAVE SUFFERED HEART ATTACKS DIRECTLY DUE TO SMOKING. I IMAGINE THAT THERE ARE FEW IN THIS ROOM WHO DO NOT PERSONALLY KNOW SOMEONE WHO HAS SUFFERED FROM A HEART ATTACK OR STROKE. NATIONALLY, OVER 400,000 DEATHS OCCUR EACH YEAR DUE TO HEART DISEASE AND STROKE AND EACH OF THESE DEATHS HAS OCCURRED DIRECTLY DUE TO SMOKING OR EXPOSURE TO SOMEONE ELSE'S SMOKE EITHER IN THE WORKPLACE OR IN THE HOME. . THIS IS NOT TO MENTION THE MANY THOUSANDS WHO SURVIVE THEIR HEART ATTACKS. BREATHING CIGARETTE SMOKE DOUBLES OR TRIPLES THE CHANCES OF HAVING A HEART ATTACK, DEPENDING ON THE AMOUNT OF EXPOSURE TO SMOKE . THE COSTS OF THIS DISEASE BOTH IN DOLLARS AND IN PERSONAL SUFFERING IS MIND-BOGGLING.

HOWEVER, I AM NOT HERE TODAY TO LECTURE YOU ABOUT THE DANGERS OF SMOKING AND SECOND HAND SMOKE; I WISH TO ONLY IMPRESS UPON YOU JUST HOW IMPORTANT THIS ISSUE IS TO THE HEALTH AND WELL BEING OF ALL CITY RESIDENTS. SMOKING IS NOT ILLEGAL AND NO ONE IS DEBATING HERE THE RIGHT OF THE INDIVIDUAL TO SMOKE. WHAT IS IMPORTANT IS THAT EACH PERSON CAN MAKE HIS OR HER OWN DECISION ON WHETHER OR NOT TO SMOKE. THE PROBLEM IS THAT OFTEN PEOPLE WHO DO NOT WISH TO SMOKE ARE FORCED TO BY THEIR CO-WORKERS AND OTHERS WHO ARE IN THE SAME ROOM. NO ONE SHOULD HAVE TO SMOKE A CIGARETTE AGAINST HIS OR HER WILL. THAT IS WHAT THIS RESOLUTION WILL DO FOR CITY WORKERS AND THE PUBLIC; INSURE THAT NO ONE HAS TO SMOKE AGAINST THEIR WILL AND THAT IS EXACTLY WHAT HAPPENS WITH SECOND HAND SMOKE. THIS RESOLUTION PROVIDES FOR THE

DESIGNATED SMOKING AREAS WHICH WOULD ALLOW SMOKERS TO SMOKE, BUT THESE WOULD BE AWAY FROM PUBLIC AREAS AND OFFICES SO THAT ONLY THOSE WHO WISHED TO SMOKE WILL DO SO. FOR THE SAKE OF THE WORKERS AND RESIDENTS OF THE CITY OF PROVIDENCE, I HOPE THAT YOU WILL ACT ON THIS RESOLUTION AND MAKE PROVIDENCE A BETTER PLACE TO LIVE AND WORK.

THANK YOU VERY MUCH FOR YOUR TIME.

DEIRDRE V. LOVECKY PH.D.
11 WHITING STREET
PROVIDENCE, RHODE ISLAND 02906
401-421-3426

CERTIFIED PSYCHOLOGIST
RI, MA.

5.

9/8/91

Joshua Fenton
Providence City Council
City Hall
Providence, RI 02903

Dear Councilman Fenton,

I am writing with regard to an article I saw in the Providence Journal about efforts to limit smoking in city buildings. I am writing specifically in favor of such limits because I am extemely allergic to tobacco smoke and other chemicals and currently cannot go into most city and many state buildings. This means I cannot go down to City Hall to register to vote, to look at my real estate tax assessments or complain about them, to attend public hearings or to deal with the Board of Elections. Since in the recent election, I also had difficulty being in the polling place, the firehouse on Rochambeau Ave., and was told to go to City Hall for a ballot, I was unable to do that either. I ended up having to get sick for several days in order to vote. I might have chosen not to vote under such conditions, but since you won the election by so few votes, one of them mine, you might consider the effect of such disenfranchishment.

Last winter I received a ticket for $15 from the city for obstructing the sidewalk with my car when I was parked in MY OWN driveway, but since I could not go to Municipal Court (or any other court in the entire state) because of the smoke and indoor pollution, I had to pay the unjust fine. This rankles since I also am unable to go to court with psychotherpay clients, or to collect money owed me in small claims court, all things everyone else can do.

I feel that continuing to allow smoking in public buildings in the city (and state) infringes on the civil rights of people like me who are handicapped in this way. This sensitivity to environmental contaminants, of which cigarette smoke is a big one, is a bona fide handicap. Under the law, access to public buildings should be assurred for me and others like me, but when city council members put their own addictions above the rights of others to have access to buildings, I see equal access only applies to a select few. This state does have a law about smoking in public places, including smoking in the workplace. It seems to me that if working people across the state can refrain from smoking in the workplace, people can refrain from smoking in city buildings. I, for one, do not think city employees nor people using city services need this perk at my expense.

Yours truly,

Deirdre V. Lovecky

Deirdre V. Lovecky, Ph.D.