

# FRAGRANCE IN THE WORKPLACE IS THE NEW SECOND-HAND SMOKE

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## **ABSTRACT**

*It took decades for the workplace to acknowledge the dangers of smoking and to recognize the deadly effects of exposure to second-hand smoke. Once acknowledged, it was a few more years before the workplace became safe for all workers from the dangers of second hand smoke. We propose in this paper that fragrance is following the same trajectory. To date most of the research on fragrance exposure has been localized in the health care profession and has not received the necessary attention it deserves in the management literature for managers to become knowledgeable about the extent of employer liability and what constitutes a good faith effort to protect workers. This paper serves as a much-needed bridge to fill this vital gap in managerial knowledge.*

*Current laws (e.g., Americans with Disabilities Act, Workers Compensation, and OSHA regulations) are identified that can be applied to fragrance exposure. The relevant laws and subsequent court cases are analyzed and the legal liability they create for employers with employees exposed to synthetic fragrance in the workplace are clearly identified. We also provide recommendations for organizations who want to demonstrate a good faith effort and be proactive to reduce or limit employees' fragrance exposure in the workplace, before being sued. We present the results of several organizations that have some experience with addressing the issue in their workplaces and identify the lessons learned. We conclude by recommending actions employers can take to proactively respond (react) to common situations of exposure that arise for employees with fragrance sensitivity.*

## **RESISTANCE TO WORKPLACE FRAGRANCE AND SECOND-HAND SMOKE**

The parallels between second-hand smoke and synthetic fragrance use are many. At its core, both are battles over indoor air quality. In the 1960's, when a few people began complaining about second-hand smoke and possible negative effects on health, the general public and business considered this a fringe movement that was unlikely to gain steam. In 1965, 42.4% of Americans over the age of 25 smoked (CDC, 2007). Smoking was the norm and even tobacco companies did not expect significant change to occur in public perception or behavior. Smoke-free city ordinances date back to 1985 initiated by the city of Aspen, CO (Isaacs et al., 2006). This marked the beginning of dramatic change that culminated with at least 30 states and the District of Columbia passing comprehensive smoke-free laws by June 2007 (Rutkow, Vernick & Teret, 2007). In addition, many local governments and businesses have instituted smoking bans as of 2008 (Bosky, 2008). According to the American Nonsmokers' Rights Foundation, currently 50% or more of the US population lives in jurisdictions with restrictions on second-hand smoke. Similarly, non-fragrance companies that sell fragrance based products (e.g., cleaning products, polishes, and laundry products) are still largely unconcerned by the general public's increasing awareness that everyday products may be detrimental to their health. The U.S. consumer is as uneducated about the dangers and health risks associated with constant exposure to the chemicals used in synthetic fragrance

products as the average non-smoker was to the risks of second-hand smoke. When ignorance is replaced with knowledge, a large segment of the population will respond with a demand for clean and safe air in the workplace. In the United States and Canada, an increasing number of clinics, schools, public buildings and meetings, buses and workplaces have declared their institutions fragrance-free: a paradigm shift is beginning.

There are key differences between encounters with passive smoke and synthetic fragrance. Passive smoke is visible and easily identified as a by-product of someone smoking cigarettes or cigars in near proximity to others, whereas synthetic fragrance is a vapor that eludes identification. As used today, fragrance is almost unlimited in where it is found and is used in hundreds of everyday, personal care products. Synthetic fragrance is not clearly defined by the manufacturer labels for the consumer to see because the FDA protects the use of fragrance under the provision of “trade secrets” established for the perfume industry many years ago (USFDA). Synthetic fragrance is added to many products to mask the odor of noxious chemicals contained in disinfectants and cleaning products. Manufacturers using synthetic fragrance need only include the word “fragrance” on the ingredients label to comply with the FDA trade secret standard. Because of these differences, businesses underestimate the potential likelihood of a fragrance free movement reaching the same level of public awareness as passive smoke and having as far reaching and broad results as the nonsmoking movement, which banned smoking in organizations and businesses at local and statewide levels. This could prove costly to all businesses, including businesses that produce synthetic fragrance based products, and businesses that only use synthetic fragrance or allow it into the workplace.

The American Nonsmokers’ Rights Foundation released a largely unknown documentary, “Death in the West”, which showed the contrast between the advertising of Marlboro cigarettes as a sexy and an attractive lifestyle to be desired against the reality of actual cowboys dying of smoking-related diseases. Phillip Morris, a tobacco company, censored the documentary after its first airing in 1976 (ANR, 1976). This decisive, quick, and aggressive action to the movie was characteristic of tobacco companies’ responses to information about the dangers of passive smoke. Fragrance companies are cautiously following their example.

In Halifax, Nova Scotia, many of the public and private organizations went fragrance free over 10 years ago. Several retailers have noticed greater than a 30% drop in sales of perfume since the fragrance-free policies were implemented. Companies have responded in various ways, some have reduced the percentage of floor space devoted to perfume. Others have instituted policies that are reminiscent of the tobacco industry such as changing their marketing strategies and developing a new product mix though their responses are less confrontational than the tobacco industry. For example, tobacco companies made their products more addictive, they marketed aggressively to other regions such as Asian markets, and focused their advertising to very specific segments. Fragrance companies and associations are also changing their marketing strategies by creating pamphlets instructing people on how to wear scent. The Canadian Cosmetics, Toiletry, and Fragrance Association developed such a pamphlet in 1999 titled, “Enjoying Your Fragrance”. Instructions on how to wear fragrance seem to imply that there is a proper, correct, and safe way to wear perfume. Additionally, some companies are actively promoting unscented cosmetics. The inference is that, unscented cosmetics are fragrance free which is not always true. The two terms are not interchangeable — which is what smokers found out when they changed to smokeless tobacco.

Today a wide range of products are sold using the same general theme as the Marlboro ads: life is better; and your clothes, body and house are cleaner, fresher, more desirable if they smell nice. However, the invisible and unlabeled ingredients that make you or your house cleaner, fresher, or more desirable are not listed on any product label. A recent analysis of 6 top selling laundry products and air fresheners found “nearly 100 volatile organic compounds (VOCs) were emitted from the products and five of the

six products emitted one or more carcinogenic hazardous air pollutants which the Environmental Protection Agency considers to have no safe exposure level” (Steineman, 2008). Research shows that second-hand smoke contains more than 4,000 chemicals, including at least 69 carcinogens and there is no established standard for safe level of exposure to many of these chemicals. (Smith, 2007).

The four major places where people are potentially exposed to second hand smoke are the same places primary exposure occurs to fragrance-based products; the workplace, home, public places, and the automobile. A final similarity is personal behavior. Smokers exposed themselves to adverse health outcomes from smoking and exposed innocent bystanders to the adverse health outcomes of second-hand smoke. Men and women use synthetic fragrance in their daily personal care products and contribute their own personal “chemical soup” to the general “chemical soup” that the general public breathes. This use of personal care products containing synthetic fragrance creates a “bubble” of toxins for that individual that continues to emit toxins hours after the product was initially used. Unlike tobacco products, some fragrance products are designed to be slow release so that the fragrance does not dissipate for an extended period of time.

The movement against fragrance looks like it is in its infancy and may take as many years as the passive smoking movement did to gain momentum, there are several key differences that suggest the fragrance-free movement will gain a quicker hold and garner more attention than did passive smoking. The most significant difference is the presence of the internet. People who have multiple chemical sensitivity (MCS) or problems with fragrance can find thousands of other people who share the same ailment with a few keystrokes. Additionally, an internet search on any of several related topics such as Scent Free Awareness yields hundreds of relevant hits. There is already an Environmental Sensitivities Research Institute made up of numerous member organizations. The Institute’s mission is to “support sound scientific and medical research into environmental intolerance issues, and to compile and disseminate information on those issues” which includes multiple chemical sensitivity. This organization is only one of many that by sharing information and strategies enables the fragrance free movement to progress quickly.

In 1999, the incidence of environmental illness and chemical sensitivity had not been widely studied, but there was plenty of anecdotal evidence. Ten years later, that is no longer true. Hundreds of studies are being performed annually, and not just by a few interested medical professionals. Research and publications are coming from lawyers, consumer advocates, risk analysts, health care organizations, public health organizations, insurers, economists, and governmental agencies (OSHA, EPA, and the EEOC). Each of these groups has the means to get the word out about their findings.

Because of the success of bans on second-hand smoke in the courts, both the public and courts continue to have increasing access to our broadened understanding of the health benefits of bans on second-hand smoke. The same situation exists today in the public information arena and in the courts about the benefits of indoor air absent fragrance. Clearly, the demands for a fragrance-free workplace are following the same trajectory as the second-hand smoke issue that began in the 1960s.

### **HEALTH RISK DUE TO FRAGRANCE**

Fragrance is a known respiratory irritant and neurological toxin and one in five people in the US experience adverse health effects from synthetic fragrance exposure (Wolff, 2006). For many people, exposure to perfume can pose serious health risks such as migraines, nausea, tightening of the throat, and respiratory impairment in the asthmatic (Canadian Employment Law, 2005). Breathing problems such as hay fever and asthma are found in 15-20% of North Americans and synthetic fragrance exacerbates these problems for many people.

The problem with fragrance products is not the scent but the properties of synthetic chemicals that they

are derived from such as petroleum or coal tar. The United States tests less than 10% of products on the market for toxicity and almost one-third of the chemical additives used in perfume are known to be toxic (Rigsby, 1996). Over the past 50 years, 80-90% of fragrances have been synthesized from petroleum and some of the commonly found harmful chemicals in fragranced products include acetone, phenol, toluene, benzyl acetate, and limonene. The chemicals used to produce the fragrance in a product are protected under trade secret laws and are not listed in the ingredients of a product. Chemical irritants in fragrance can initiate a sensitizing process within an individual's immune system as it learns to recognize materials that later prompt a response/reaction when re-exposure occurs (Lessenger, 2001). The ingredients in several top household brands of air fresheners include certain Volatile Organic Compounds, chemicals that keep the fragrance molecules airborne so the fragrances linger longer. Volatile Organic Compounds (VOCs) are emitted as gases and include a variety of chemicals, some of which may have short- and long-term adverse health effects (US EPA).

There are four categories of health effects due to fragrance: Respiratory, which includes allergic asthma, non-allergic asthma, reactive airway dysfunction syndrome (RADS); Neurological, which includes headaches, migraine headaches, nausea, dizziness, and mental confusion; Skin, urticaria, irritation and sensitization; and Eye, irritation, tearing and inflammation.

A strong association is found between bronchial hyper-reactivity (BHR) and respiratory symptoms elicited by synthetic fragrance products (Eberling et al., 2005). Fragrance exposure challenge in patients with asthma decreased forced expiratory volume (FEV) in one second by 18% to 58% and within a survey study of 60 asthmatic patients, 57 patients reported a history of respiratory symptoms on exposure to one or more fragrances (Anderson & Anderson, 1998; Kumar, et al., 1995; Shim, 1986; Schlueter et al., 1979). The negative health effects of fragrance to asthmatics are well researched and documented now for many decades (Kogevinas, et. al., 2007). A study measuring histamine release from exposure to perfume demonstrated a positive association between inflammatory conditions of the skin and airways and perfume exposure (Eberling et al., 2007).

Chemical sensitivity has been diagnosed in 2.9% of the population of NSW, Australia. The number is expected to increase dramatically as the primary care physicians gain more familiarity with MCS and the diagnostic protocols. A similar increase is expected in the U.S. In fact, California's health department leads the country in MCS syndrome research. Six percent of California's population has been diagnosed with MCS. (OSHA, 2008) other research estimates the national prevalence rate hypersensitivity among the general population to be 15.9% (Steinemann, 2004).

### **COSTS TO EMPLOYERS**

The adverse health effects to employees cost employers billions of dollars annually. For example, in 2002 it was estimated that 30.8 million people in the U.S., including 9 million children, had asthma diagnosed at some point in their lives. Other studies have also shown that 10-23% of new adult onset asthma is due to occupational exposures and in 2003; adults missed 24.5 million workdays due to asthma. In 2004, migraine headaches cost American employers \$24 billion in direct and indirect healthcare costs.

In addition to absences and lost productivity are increased medical and health insurance costs, and costs associated with lawsuits.

### **COMMON PRODUCTS CONTAINING FRAGRANCE**

There are over 70,000 different industrial chemical products used today. Contrary to popular belief, synthetic fragrance is not found only or even primarily in perfumes. Over 4,000 chemicals are used to make fragrances and hundreds can be used in one product. Many of these chemicals vaporize into the air we breathe. Factors that contribute to the degree, severity, frequency, and type of health risk encountered

by workers include toxicity, ventilation, individual sensitivity, dose, duration, and frequency of exposure.

The following list of common products in which synthetic fragrance is found can vary widely. Multiple people working in the same work environment use many of these products thus creating a “chemical soup” of the indoor air. Some are associated with people, materials, buildings, and products. Some are introduced by an individual knowingly, many are not. A sampling of these products includes:

Lotion and cream

Prescription and nonprescription medications (e.g., inhalers and sports creams)

Hairspray

Soap (bath soap, dish soap and laundry soap)

Shampoos and conditioners

Deodorant

Aftershave

Air fresheners and deodorizers

Sunscreen

Anti-acne products

Insect repellants

Potpourri

Candle

Industrial and household chemicals

Furniture polish

Mouthwash

Dental floss

Toothpaste

Nail polish and removers

Scented pens and pencils

Diapers

Powder

Fabric softener

Oils

Paper (magazines, newsprint, and stationery)

Cosmetics

Disposable razors with creams and softeners added

Some foods (battered microwave popcorn)

Some scent-free industrial products have higher volatile organic compounds (VOCs) to mask their naturally offensive smells

Building, construction and renovation materials — formaldehyde, asbestos, paint, varnish, urethane finishes

### **EMPLOYMENT LAWS APPLICABLE TO FRAGRANCE EXPOSURE**

There are several laws that can be applied to fragrance exposure that may require the employer to make changes to the work environment. These include the Americans with Disabilities Act of 1990 (ADA) and the new ADA Amendments, the Rehabilitation Act of 1973 which provides the same access as the ADA does for federal employees, Workers' Compensation Act, and OSHA regulations.

The ADA is the primary law used successfully to ban smoking in businesses and places of public accommodation. It is also the law used most frequently to obtain fragrance-free workplaces. Title I of the ADA states, “No covered entity shall discriminate against a qualified individual with a disability because of the disability of rich individual in regard to job application procedures, the hiring, advancement, or discharge of employees, employee compensation, job training, and other terms, conditions and privileges

of employment.”

There have been many lawsuits pertaining to MCS and synthetic fragrance sensitivity filed using the ADA and the Rehabilitation Act. The cause of action and protections afforded under each are very similar and so we will simply refer to ADA claims in this paper. To bring a claim under the ADA, a plaintiff must establish that s/he is disabled according to the standards set by the ADA. Consequently, the standards used to determine disability are important. There are 3 separate questions that must be answered. First, is the disability a physical or mental condition? Second, does the condition substantially impact one or more major life activities? And third, is the major life activity substantially limited? The ADA regulations provide a lengthy list of conditions and diseases that are or may be impairments and a list of those that are not. Respiratory impairments may constitute a disease or condition that is protected and that is the most frequent disease or condition identified when using MCS and fragrance sensitivity. It is clear that MCS and fragrance sensitivity is not excluded from being a qualified disability but it is not automatically included either.

Whether an individual has a disability as defined by the ADA must be decided upon on a case-by-case basis as stated by the Supreme Court. As we showed in earlier sections of this paper, disabilities, including the sensitivities that are the focus of this paper, affect people in different ways. At this point, another variable enters the determination of what is a disability; the medical documentation provided by the doctor of the symptoms, treatment, probable cause, and patient prognosis. Additionally, sometimes the testimony of “experts” is solicited and then the research and current accepted professional practice are considered. As discussed earlier, what is considered accepted medical practice is rapidly changing related to these diseases.

The next step in determining the existence of a disability is to identify which major life activities are impacted. As defined by the ADA, major life activities are those central to everyday life such as, walking, breathing, thinking, speaking, learning, performing manual tasks, caring for oneself, and hearing. After identifying which life activities are impacted, the next test is to identify to what extent and whether the activity is significantly affected or substantially limited. Minor impairments will not meet the definition requirements. Factors that may be used in determining whether the impairment is significant is whether the impairment is permanent or temporary and whether there are mitigating measures that can be taken to reduce the limitation. There are recent instances where temporary diseases are considered to limit a major life activity, for example, some forms of depression.

Some plaintiffs were able to demonstrate a documented disability that significantly limits a major life activity but were unable to prove the discrimination claim because they could not show they were qualified for the position with or without reasonable accommodation. We will not elaborate on how qualifications are determined because that is not the central topic of this paper.

However, reasonable accommodation is an important consideration and can include a variety of actions. The ADA states, “reasonable accommodation may include job restructuring, part-time or modified work schedules, reassignment to a vacant position, acquisition or modification of equipment or devices, appropriate adjustment or modifications of examinations, training materials or policies, the provision of qualified readers or interpreters and other similar accommodations for individuals with disabilities.” Although an employee proposes a reasonable accommodation, the employer does not have to comply if the accommodation would pose an undue hardship. In *Hunt v. St. Peter School*, the plaintiff demanded that her daughter be provided with a scent free environment. The school complied by making the classroom scent-free but not mandating a scent free school. The school successfully argued that enforcing such a policy represented an undue hardship for the school and infringed on others’ individual rights. Such arguments will be less successful in the future as more experience with broad bans on fragrance are implemented by businesses and localities (e.g., Halifax). Data is growing that scent free workplaces,

schools, public accommodations, and localities are possible, enforceable, cost effective and improve individual health.

Workers' Compensation Laws also address synthetic fragrance sensitivity and MCS. All 50 states have laws governing workers' compensation and the laws are not identical but they are similar. Workers' compensation essentially operates as a no-fault insurance program. Workers who are injured or disabled while working are provided benefits to compensate for injuries suffered during work regardless of how the injuries were caused, even if the employee was at fault. The benefits provided through Workers' Compensation include: payments of medical expenses, income replacement for disability when the injured worker is unable to return to work, and benefits to families of workers killed on the job. In exchange for these benefits, an employee accepts the benefits provided by the workers' compensation "insurance" and seeks no other claims or remedies.

As reported in a Fourth Annual Federal Workers' Compensation Conference and even earlier in 2004 workers compensation claims related to indoor air quality, MCS, and fragrance have been increasing the past 10 years. Employers who refuse to recognize the negative health effects will continue to incur increased costs of workers' compensation.

One issue that recurs in these cases is whether MCS and synthetic fragrance sensitivity can be distinguished from ordinary diseases of life. Ordinary diseases of life are not in and of themselves excluded. However, in order to be compensable the employment does not have to be the sole cause of the injury. If employment substantially contributes to the injury then it may be compensable under workers' compensation laws. For example, the North Dakota Compensation Commission ruled, "it is insufficient to afford compensation under this title solely because the employment acted as a trigger to produce symptoms in a latent and underlying condition if the underlying condition would likely have progressed similarly in the absence of such employment trigger, unless the employment trigger is also deemed a substantial aggravating or accelerating factor."

An additional factor that may cause difficulty with such claims is that reporting guidelines require that all accidents or injuries be reported within a specified period, usually 90 days. In some cases, MCS and fragrance sensitivity are cumulative and occur over time so the date of first injury may be questioned and thus procedural, reporting issues may affect the validity/compensability of claims.

A third law that has implications for employers and synthetic fragrance sensitivity is the Occupational Health and Safety Act (OSHA). The regulations of the Occupational Health and Safety Act do not currently identify specific levels of fragrance that are acceptable or prohibited. However, as discussed earlier the research keeps expanding and being refined. Two decades ago, many scientists denied that evidence existed that second-hand smoke was a health hazard and now it is accepted scientific fact. The same change of perspective is happening with MCS and synthetic fragrance. Fragrances (containing chemicals) that were thought to have pleasant or neutral effects on health are now acknowledged as either hazardous or potentially hazardous. This is particularly true since chemical formulations of fragrances were changed post WWII with the use of pesticides and petroleum products making fragrance and cleaning products more powerful, potent, and toxic. The unregulated fragrance industry has not tested over 3200 of the 4000 chemicals used in fragrance sold for personal use to consumers for toxicity. The chemicals stay in the air for long periods and can mix and react with other compounds causing additional unknown effects. Indoor use of these products, where air exchange can be less than ideal, can further exacerbate problems. The general duty clause of the Occupations Health and Safety Act requires employers to "take every precaution reasonable in the circumstances for the protection of the worker." Enough research demonstrates negative effects of synthetic fragrance, that employers can no longer deny knowledge of what constitutes basic precautions.

**RECOMMENDATIONS FOR EMPLOYERS RESPONDING TO EMPLOYEE SENSITIVITY**

What can employers do who are not ready to implement a fragrance-free workplace policy but do want to demonstrate a good faith effort to reduce or limit employees' exposure to synthetic fragrances in the workplace? Also, what proactive steps can be taken towards improving indoor air quality in the workplace? The Job Accommodation Network regularly recommends that employers be willing to implement the following:

- Pop up reminders on computers about ban or guidelines on the use of scented products.
- Warning signs posted in restrooms about fragrance use.
- Signage throughout the building.
- Request to avoid fragrance on stationary, computer signatures, sign on office door.
- Strongly recommend that employees refrain from wearing scented products to work.
- Limit proximity to exposure to air fresheners and the ventilation system.
- Utilize alternative work schedules or work from home arrangements.
- Utilize air purifiers as needed based on testing results or individual sensitivity.
- Regular air testing by an industrial hygiene professional.
- Allow the individual to wear a respirator mask.
- Utilize electronic communication or other alternatives to limit exposure to others.
- Have scent-free meeting rooms.
- Allow rest breaks as needed.
- Educate management and co-workers about how to create and maintain indoor air quality by limiting exposure to scented products.

**LESSONS LEARNED ABOUT BECOMING A PROACTIVE EMPLOYER**

There are several organizations that have experience developing fragrance-free workplaces. We briefly discuss the experiences of these organizations and identify the lessons learned regarding policy implementation.

Most of the organizations that have implemented fragrance-free zones or workplaces undertook the initial effort as a response to either a negative incident (e.g., a sick building or a catastrophe) or because of an employee's complaint or request for accommodation. The organizations that have the most experience were initially "reactors". However, many of these employers reacted with planning and forethought to ensure effective policy development and implementation, and they reacted so far ahead of other employers that they became proactive in the process. In 1991, Queen Elizabeth II Health Sciences Center was one of the first to enact a scent-free workplace policy. There are six common lessons learned from these organizations.

Contrary to what is "accepted" business practice, organizations that are successful at developing and implementing a scent-free policy do not start by developing a policy statement. Instead, lessons learned from successful organizations show that prior to developing a policy it is first important to conduct an employee needs assessment and continue it over time. The needs assessment should identify who is affected by exposure to scented products, the degree of exposure, sources of exposure, and possible remedies.

Second, once a need is identified then an organizational chemical assessment must be performed. The assessment includes a review of all existing chemical products used at the business. Identify all chemical products used by, or at, the organization and which are most likely to affect indoor air quality. In addition to chemicals used by, or at, the organization, "personal use" chemicals used by employees should also be identified. It is recommended to include employees early in the testing and assessment process. Usually the assessment phase offers a valuable opportunity to begin educating employees about chemical exposure due to scents.



The third step is to conduct a literature and legal search. In the past ten years, science is evolving and more is learned about the effects of synthetic fragrance. When MCS was first provided a name, there was much debate and skepticism about whether it was an actual identifiable illness with a specific and identifiable cause. In recent years the medical community is changing its viewpoint. For example, now there are guidelines about the clinical evaluation process and management of MCS syndrome for medical practitioners and primary care doctors. As with research on second-hand smoke, that on fragrance in the workplace and other illness related to MCS continues to evolve. The organization must have up-dated information about the possible causes and effects of personal scented products on things such as sick building syndrome.

As discussed in the earlier section on relevant employment laws it is essential that managers have a basic understanding of applicable local, state, and federal legislation and its implication for daily management practices.

Step five is the actual development and implementation of a scent-free policy. Lessons learned from organizations such as Alacrity Ventures, a California based firm, are to include employee representation in all phases of the development, implementation, and evaluation of a fragrance-free policy. “Buy-in” is essential but it is not the only key ingredient. Employee “buy-in” will take time. And consistent attention by management to “getting it right” pays dividends in the end.

Step six is to keep top executive support and the support of occupational health and safety committee/officers. The policy will affect all employees. Ensure all departments understand their role in the success of policy implementation (e.g., maintenance and cleaning departments, communication and public relations, and the core “production/service” departments). It is not uncommon for the policy to be low on employees’ radar early in the implementation process. It is important for top management to articulate a clear message and commitment about clean air being central to employee health as the basis for the policy.

Step seven is to develop a discipline process prior to implementation. Anticipate that people will be resistant to change. Develop a policy that encourages all employees to share the responsibility for enforcing the policy. Ensure that employees have clear guidelines for how and when to confront a suspected violation of the scent-free policy. Be clear about how infractions will be handled and the process for appropriate resolution. Policies that require only a few people to be responsible for enforcement (“watchdog” policies which emphasize punishment) tend to meet more resistance and take longer to obtain employee commitment than policies with a shared enforcement approach (“my brother’s keeper” which emphasize shared responsibility and care for others).

Step eight is to develop strategies for communicating the policy to “outsiders” (e.g., customers, vendors, members of the public and contractors). Also, be clear to employees about infrequent instances when the policy may not be able to be enforced so they develop realistic expectations.

And finally, regularly evaluate the policy for effectiveness and make changes as needed. Respond to employee needs. Realistically assess where the policy is working and where gaps exist between the policy intent and the result achieved. Assess and measure outcomes. Share the successes of policy implementation on employee health and organizational productivity with employees.

## REFERENCES

Americans with Disabilities Act (1990). <http://www.usdoj.gov/crt/ada/adahom1.htm>

American Nonsmokers' Rights Foundation (2007). Percent of the U.S. State Commonwealth Populations Covered by 100% Smokefree Air Laws, available at <http://nosmoke.org/pdf/percentstaepops.pdf>

Americans for Nonsmokers' Rights <http://www.no-smoke.org/aboutus.php?id=443>

Bosky, A. (2008). "Ashes to Ashes: Secondhand Smoke Meets Timely Death In Illinois." *Loyola University Chicago Law Journal*, 39, 847, 1-57.

Canadian Centre for Occupational Health and Safety (CCOHS), 2007. Scent-free policy for the workplace. *CCOHS resource document*. Retrieved from URL: [http://www.ccohs.ca/oshanswers/hsprograms/scent\\_free.html](http://www.ccohs.ca/oshanswers/hsprograms/scent_free.html)

Center for Disease Control and Prevention (CDC), 2007. Smoking and tobacco use. Percentage of adults who were current, former, or never smokers, overall and by sex, race, Hispanic origin, age, education, and poverty status. National Health Interview Surveys, Selected Years—United States 1965-2006. Accessed on 12/10/2008 from URL: [http://www.cde.gov/tobacco/data/statistics/tables/adult/table\\_2.htm](http://www.cde.gov/tobacco/data/statistics/tables/adult/table_2.htm)

Eberling, J., Linneberg, A., Dirkson, A., Johansen, D., Frolund, L., Madsen, F., Nielsen, N., Mosbech, H. (2005). "Mucosal Symptoms Elicited by Fragrance Products in a Population-based Sample in Relation to Atopy and Bronchial Hyper-reactivity." *Clinical and Experimental Allergy*, Vol. 35: 75-81.

Eberling, J., Skov, P., Mosbech, H., Dirkson, A., Johansen, J. (2007). "Increased Release of Histamine in Patients with Respiratory Symptoms Related to Perfume". *Clinical and Experimental Allergy*, Vol. 37: 1676-1680.

Environmental Health Network, (2002). Fragrance-Controlled Workplace. *Brigham and Women's Hospital Personnel Policy Manual, VH-110*. Retrieved from URL: <http://users.lmi.net/wilworks/ehnhompg/bwhosp.htm>

Environmental Working Group, (2007). Nurses' Health: A survey on health and chemical exposure. Organization publication in collaboration with Health Care Without Harm, American Nurse Association, and University of Maryland School of Nursing, Environmental Work Group, Baltimore.  
URL: [www.ewg.org](http://www.ewg.org)

Frosch, P., Johansen, J., Menné, T., Pirker, C., Rastogi, S., Andersen, E., Bruze, M., Goossens, A., Lepoittevin, J., White, I., (2002). "Further Important Sensitizers in Patients Sensitive to Fragrances. *Contact Dermatitis*, Vol. 47:78-85.

Health Care Without Harm, (2006). "Risks to Asthma Posed by Indoor Health Care Environments: A Guide to Identifying and Reducing Problematic Exposures." Organization publication in collaboration with Lowell Center for Sustainable Production, School of Public Health and Environment, University of Massachusetts, Lowell, Autumn 2006. URL: [www.noharm.org](http://www.noharm.org)

Hunt v. St. Peter School, 963 F. Supp. 843, (W. D. Mo 1997).

Isaacs, S., Knicieman, J., Warner, K., (Eds.), 2006. *Tobacco Control Policy: Robert Wood Johnson Foundation Series on Health Policy*. John Wiley & Sons, Hoboken, NJ.

Job Accommodation Network. (2008).

Kendall, J. (1997). "Twenty Most Common Chemicals Found in Thirty-one Fragrance Products." Distributed by Environmental Health Network. Retrieved from URL: <http://users.lmi.net/%7Ewilworks/ehn20.htm>.

Kogevinas, M., Zock, J., Jarvis, D., Kromhout, H., Lillienberg, L., Plana, E., Radon, K., Torén, K., Alliksoo, A., Benke, G., Blanc, P., Dahlman-Hoglund, A., D'Errico, A., fiery, M., Kennedy, S., Kunzl, N., Leynaert, B., Mirabelli, M., Muniozguren, N., Norback, D., Oliviero, M., Payo, F., Villani, S., van Sprundel, M., Urrutia, I., Weislander, G., Sunyer, J., Antó, J., (2007). "Exposure to Substances in the Workplace and New-onset Asthma: An International Prospective Population-based Study." (ECRHS-II). *The Lancet*, Volume 370, Issue 9584, 28 July 2007- 3 August 2007, pp 336-341.

Lessenger, J. (2001). "Occupational Acute Anaphylactic Reaction to Assault by Perfume Spray in the Face." *Journal of the American Board of Family Practice*, Vol.14, No.2: 137-140.

Massachusetts Nursing Association Online (2007) Fragrance Free! Creating a safe health care environment. Program, #2006003. Retrieved from URL: [http://www.courseserver.com/mna/certificates/mna\\_certificate\\_r2.asp?courseid=9](http://www.courseserver.com/mna/certificates/mna_certificate_r2.asp?courseid=9)

Rutkow, L., Vernick, J., & Teret, S. (2007). "Banning Second-hand Smoke in Indoor Public Places Under the Americans with Disabilities Act: A Legal and Public Health Imperative." *Connecticut Law Review*, 40,409, 1-46.

Smith, S. (2007). "The Right to Breathe Clean Air". *Occupational Hazards*. Cleveland: Vol. 69, Issue 11; Nov. pg. 6.

Steinemann, A. (2004). "Prevalence of Multiple Chemical Sensitivities: A Population-Based Study in the Southeastern United States," *American Journal of Public Health*. Washington: May. Vol. 94, Iss. 5; pg. 746-747.

Steinemann, A. (2008). "What's in Common Household Products?" *Journal of Environmental Impact Assessment Review*.

Steinemann, A. (2007). "Laundry Fragrances, Air Fresheners May Have Dangerous Toxins," <http://www.emaxhealth.com/5/23479.html>

Wolff, P. 2006. "Campaign for Fragrance Free Health Care in the US; Improving Indoor Air Quality in Healthcare Settings by Controlling Synthetic Fragrance: What You as a Nurse Can Do." *The Maryland Nurse*, Feb.-March, 2006, 7-9.

United States District Court for the Eastern District of Tennessee. Tracy McDonald, Plaintiff, v. John E. Potter, Postmaster General, Defendant, No. 1:06-CV-1 Lee, Filed August 7, 2007.

U.S. Department of Labor, Office of Disability Employment Policy, 2006. Employees with fragrance sensitivity. *Job Accommodation Network document*. Retrieved from URL: <http://www.jan.wvu.edu>

U.S. Food and Drug Administration, 2005. Dockets FDA., 99P-1340.  
URL: [http://www.fda.gov/ohrms/dockets/dockets/99p1340/99P-1340\\_emc-000577.txt](http://www.fda.gov/ohrms/dockets/dockets/99p1340/99P-1340_emc-000577.txt)