

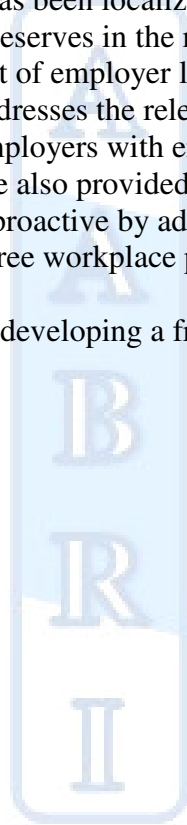
Fragrance in the workplace: what managers need to know

Christy De Vader
Loyola University of Maryland

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 workers from the dangers of second hand smoke. This paper suggests 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 addresses the relevant laws and subsequent court cases and the legal liability they create for employers with employees exposed to synthetic fragrance in the workplace. Recommendations are also provided for organizations who want to demonstrate a good faith effort and be proactive by addressing fragrance. The final section describes how to develop a fragrance-free workplace policy.

Keywords: Fragrance-free workplaces, developing a fragrance free policy



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. The Center for Disease Control (CDC, 2007) reported that in 1965, 42.4% of Americans over the age of 25 smoked. Smoking was the norm and even tobacco companies did not expect significant change to occur in public perception or behavior. However, smoke-free city ordinances date back to 1985, initiated by the city of Aspen, CO (Isaacs, Knicicman & Warner, 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 (2007), 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, universities, churches, public buildings and meeting places, lodging, buses, and workplaces have declared their institutions fragrance-free: it appear as though a paradigm shift is beginning (Fumento, 2000; Greenberg, 1999, Shannon, 2007; and U.S. Access Board 2000).

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 in proximity to others, whereas synthetic fragrance is a vapor that may elude 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 Food and Drug Administration (FDA) protects the use of fragrance under the provision of "trade secrets" established for the perfume industry many years ago (U.S. FDA, 2005). 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 label to comply with the FDA trade secret standard. And for cosmetics, if the ingredient list ends with "and other ingredients", then the cosmetic product was granted trade secret status (U.S. Food and Drug Administration, 1994).

Because of these differences, businesses may 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. Yet, it was only in 1973 that the Fair Packaging and Labeling Act required ingredient lists on the labels of cosmetic products (U.S. FDA, 1994). 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 (ANR) Foundation released a largely unknown documentary, "Death in the West" (Pyramid Films, 1983), which showed the contrast between the advertising of Marlboro cigarettes as a desirable, sexy and attractive lifestyle, 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, 2008). 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 33% drop in sales of perfume since fragrance-free policies were implemented (Greenberg, 1999). Companies have responded in various ways. Some companies 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 market segments (e.g., preteens). Fragrance companies and associations are also changing their marketing strategies by developing long-lasting fragrance products, marketing directly to girls and boys, and 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 marketing 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 (EPA) considers to have no safe exposure level" (Steineman, 2008). Similarly, research found 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 (American Cancer Society, 2008). 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 the wearer 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 dissipates over an extended period of time (Bird, 2008; Fleischer, 2007; and Rosen, 2005;).

The movement against fragrance is in its infancy and may take as many years as the passive smoking movement did to gain momentum. However, 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 (<http://www.wsri.org>) 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 (Bell, Schwartz, Peterson & Amend, 1993b; Bell, Peterson & Schwartz, 1995; Cullen, 1987; Cullen, Pace & Redlich, 1992; Davidoff & Keyl, 1996; Fiedler, Maccia & Kipen, 1992; Kipen, Hallman, Kelly-McNeil, & Fiedler; Lessof, 1997; Lieberman, DiMuro & Boyd, 1995; Meggs, Dunn, Bloch, Goodman, Davidoff, 1996; Mooser, 1987; Randolph, 1952; U.S. Environmental Protection Agency, 1991; Ziem & McTamney, 1995). 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 (e.g., OSHA, EPA, and the EEOC). Most of these agencies, organizations and groups have a website and links to other individuals and organizations that are a primary source of communication (Center for Science in the Public Interest, 2009; Office of Environmental Health and Safety, 2005). Information on how to mobilize grassroots change efforts is readily available (Media Awareness Project, 2009). Consequently, these organizations have the ability 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 the 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 (Fisher, 1998; *McBride v The City of Detroit*, 2007; Pitman, 2007; Salvador, 2007, Salvador, 2009; Singer, 2008).

HEALTH RISK DUE TO FRAGRANCE

Kosta (1998) reported that one in five people in the U.S. are adversely affected from

exposure to fragrance. Fragrance is a known respiratory irritant and neurological toxin. For many people, such as those exposed to asthma, exposure to perfume can pose serious health risks such as migraines, nausea, tightening of the throat, and respiratory impairment (Canadian Payroll and 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 (Baldwin, Bell, O'Rourke & Lebowitz, 1997; Bell, Schwartz, Peterson & Amend, 1993a; Kurt, 1995; Lax & Henneberger, 1995; Marsh, 1998; Terr, 1986; Ziem, 1992).

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. 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 (U.S. FDA, 2005). 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 (Frosh et al., 2002). The fragrance industry uses over 4000 chemical ingredients to make their products and over 80% of these chemicals have not been tested for their toxicity (Canadian Union of Postal Workers; Health and Safety Bulletin, 2003). 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 (VOCs), chemicals that keep the fragrance molecules airborne so the fragrances linger longer. Volatile Organic Compounds are emitted as gases and include a variety of chemicals, some of which may have short- and long-term adverse health effects (U.S. Environmental Protection Agency 2009).

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 (Anonymous, 2006).

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). The negative health effects of fragrance to asthmatics are well researched and documented now for many decades (Stratton, 2007; 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, Skov, Mosbech, Dirkson, & Johansen, 2007).

In 2002, chemical sensitivity has been diagnosed in 2.9% of the Australian population (Centre for Epidemiology and Research, 2003). The number is expected to increase dramatically as 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. Sixteen percent of California's population has

been diagnosed with MCS and other research estimates the national prevalence rate hypersensitivity among the general population to be 15.9% (Steinemann, 2004). Caress and Steinemann (2005) also found, in a national population study, that 31.1% had a negative physical reaction to scented products, and 17.6% to air fresheners. Other research also indicates that scented products can trigger an asthma attack (Schim & Williams, 1986; US FDA, 2003).

COSTS TO EMPLOYERS

The adverse health effects to employees cost employers billions of dollars annually. For example, in 2007 the Center for Disease Control estimated that 22.9 million people in the U.S., including 6.7 million children, are currently diagnosed with asthma.(CDC, 2009 a,b). Bridges (2002) reported that research by the Institute of Medicine equated fragrance to second hand smoke in triggering asthma in adults and children. Other studies have also shown that 72% of asthmatics have a negative physical reaction to perfumes (Schim & Williams, 1986). In 2004, migraine headaches cost American employers \$24 billion in direct and indirect healthcare costs and in 2007 asthmatics lost an average of 30 work days to absenteeism and presenteesim (Long, 2007). In addition to absenteeism and lost productivity, there are also losses from increased costs for medical and health insurance, and costs associated with lawsuits (Long, 2007).

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 (Steinemann, 2007). 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 (Kendall, 1997). 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
- Cat litter

EMPLOYMENT LAWS APPLICABLE TO FRAGRANCE EXPOSURE

The Job Accommodation Network (www.JAN.org) received 37 complaints related to fragrance and work between 1992-1995 and 567 cases between 1995-2000. Similar increases in fragrance related complaints are occurring at the state and federal level. 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 (EEOC, 2009) the Rehabilitation Act of 1973 which provides the same access as the ADA does for federal employees, The Federal Employment Compensation Act and the state administered Workers' Compensation Acts and Occupational Safety and Health Administration (OSHA) regulations (www.osha.gov, 2004; U.S. Dept. of Labor, 2009).

The ADA (1990) 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 (1990) states, "No covered entity shall discriminate against a qualified individual with a disability because of the disability of each 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 (*McDonald v Potter*, 2007). The cause of action and protections afforded under each are very similar and so only ADA claims are referred to 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 three 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 EEOC provides a detailed set of conditions and diseases that are or may be impairments and a description of those that are not (EEOC, 2009). 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, sleeping, thinking, speaking, learning, performing manual tasks, caring for oneself, hearing, and bodily functions (ADA Amendments Act of 2008). 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 are whether the impairment is permanent or temporary, and whether there are mitigating measures that can be taken to reduce the limitation. There are instances where temporary diseases are considered to limit a major life activity, for example, some forms of depression (EEOC, 2009 section 902.7b).

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 (Kotowski, 2007). How qualifications are determined is not discussed here because that is not the central topic of this paper.

However, reasonable accommodation is an important consideration and can include a variety of actions (U. S. Department of Labor, 2006). 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* (1997), 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 (Canadian Human Rights Commission, 2007; Singer, 2008).

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 (waysandmeans.house.gov, 2003). 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 (waysandmeans.house.gov, 2003).

As reported at an annual Federal Workers' Compensation Conference (2006) 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 (1994) 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 Safety and Health Act (OSH Act, 1971). The regulations of the Occupational Safety and Health 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 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 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 (2008) regularly recommends that employers be willing to implement the following:

Pop up reminders on computers about bans 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.

STEPS FOR DEVELOPING A FRAGRANCE POLICY

There are several organizations that have experience developing fragrance-free workplaces (Massachusetts Nursing Association, 2007; Shannon, 2006; Wolff, 2005). A partial listing includes: Rocky Mountain Environmental Health Association, Planet Thrive, Jefferson City Public Schools, the Massachusetts Nursing Association, University of Wisconsin-Stout, University of Guelph, The Stone Lion Inn, Soldier's Memorial Hospital, Maine Department of Labor, Kaiser Permanente, American Public Health Association, and the Canadian Hearing Society.

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 (Environmental Health Network, 2002; Health Care Without Harm, 2006). 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 (Canadian Centre for Occupational Health and Safety, 2007; Environmental Health Network, 2002).

There are three lessons that can be learned from these organizations regarding policy implementation. The first lesson results from an analysis of organizational fragrance policies. This analysis shows that policy development and implementation is more successful when the human resource management organizational needs assessment practices are integrated with the occupational health practice of conducting chemical audits and when these practices are informed by current legal interpretations and laws. The second lesson, is that contrary to what might be 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 third lesson is that in most cases policy development will originate with an employee or customer who is affected by fragrance and acts as an advocate for policy development.

A review of workplace fragrance free policies shows that there are eight steps in developing an effective policy. The first step is to conduct an employee needs assessment. The needs assessment should identify who is affected by exposure to scented products, the degree of exposure, sources of exposure, and possible remedies. In addition to employees other relevant organizational stakeholders should be also included, such as customers/patients, vendors, and the public.

Second, once a need is identified, 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 (Wolff, 2005). Communicating the results to employees as the plan for policy development moves forward is critical. Feedback from employees is useful for identifying points of employee buy-in and resistance to change.

The third step is to conduct a literature and legal search. In the past ten years, science has evolved and we learn more 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 has changed 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, research on fragrance in the workplace and other illnesses related to MCS continues to evolve. Organizations must have updated information about the possible causes and effects of personal scented products on things such as sick building syndrome (EPA 2008; Lieberman, DiMuro & Boyd 1995).

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 four 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 five 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 six 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 seven 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, step eight is to 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

- American Cancer Society (2008). Secondhand Smoke. Retrieved Sept. 1, 2008 from http://www.cancer.org/docroot/PED/content?PED_10_2X_Secondhand_Smoke-Clean_Ind
- Americans with Disabilities Act (1990). Retrieved August 10, 2008 from <http://www.usdoj.gov/crt/ada/adahom1.htm>
- Americans with Disabilities Act of 1990, as Amended with ADA Amendments. (2009). Retrieved April 16, 2009 from <http://www.ada.gov/pubs/adastatute08.htm>
- American Nonsmokers’ Rights Foundation (2007). Percent of the U.S. State Commonwealth Populations Covered by 100% Smokefree Air Laws, Retrieved August 10, 2008 from <http://nosmoke.org/pdf/percentstaepops.pdf>
- Americans for Nonsmokers’ Rights (2008). Retrieved August 10 from <http://www.nosmoke.org/aboutus.php?id=443>
- Anderson, R. & Anderson, J. (1998). Acute Toxic Effects of Fragrance Products, *Archives of Environmental Health*, March-April, 53(2), 138-146.
- Anonymous. (2006). When Banning Fragrances, *Canadian HR Reporter*, 19(11), ppg. 16.
- Baldwin, C. M., Bell, I. R., O'Rourke, M. K., Lebowitz, M.D. (1997). The association of respiratory problems in a community sample with self-reported chemical intolerance.

- European Journal of Epidemiology*, 13, 547-552.
- Bell, I. R., Peterson, J. M., Schwartz, G. E. (1995). Medical histories and psychological profiles of middle-aged women with and without self-reported illness from environmental chemicals. *Journal of Clinical Psychiatry*, 56(4), 151-160.
- Bell, I. R., Schwartz, G. E., Peterson, J. M., Amend, D. (1993a). Self-reported illness from chemical odors in young adults without clinical syndromes or occupational exposures. *Arch Environmental Health*, 48(1), 6-13.
- Bell, I. R., Schwartz, G. E., Peterson, J. M., Amend, D. (1993b). Symptom and personality profiles of young adults from a college student population with self-reported illness from foods and chemicals. *Journal of the American College of Nutrition*, 12(6), 693-702.
- Bird, K. (2008). Natural nano's technology extends life of nail varnish. Retrieved May 12, 2009 from <http://www.cosmeticsdesign-europe.com/Products-Markets/NaturalNano-s-technology-exte>
- Bosky, A. (2008). Ashes to Ashes: Secondhand Smoke Meets Timely Death In Illinois. *Loyola University Chicago Law Journal*, 39, 847, 1-57.
- Bridges, B. (2002). Fragrance: emerging health and environmental concerns. *Flavour and Fragrance Journal*. 17(5). 361-371.
- Canadian Centre for Occupational Health and Safety (CCOHS). (2007). Scent-free policy for the workplace. *CCOHS resource document*. Retrieved August 12, 2008 from http://www.ccohs.ca/oshanswers/hsprograms/scent_free.html
- Canadian Cosmetics, Toiletry and Fragrance Association. Retrieved August 12, 2008 from <http://www.cctfa.ca/site/cctfa/>
- Canadian Human Rights Commission (2007). Accommodating environmental Sensitivities: State of knowledge. Retrieved August 12, 2008 from http://www.chrc-ccdp.ca/research_program_recherche/esensitivities_legal_hypersensibilities
- Canadian Payroll and Employment Guide. (2005). Dealing with fragrance sensitivity in workplaces. Retrieved August 12, 2008 from <http://www.hrmguide.net/canada/law/fragrance-sensitivity.htm>
- Canadian Union for Postal Workers, (2003). *Health and Safety Bulletin*, June 17. Bulletin no.: 2002-2005/103. Retrieved August 12, 2008 from http://www.cupw.ca/index.cfm/ci_id/5093/la_id/1.htm
- Caress, S & Steinemann, A. (2005). The national prevalence of chemical hypersensitivity, the medical diagnosis of multiple chemical sensitivities, and potential overlaps with asthma. *Health Care Industry*, August-September. Retrieved August 12, 2008 from http://findarticles.com/p/articles/mi_m0ISW/is_265-266/ai_n15795045
- Center for Disease Control and Prevention (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. Retrieved December 10, 2008 from http://www.cde.gov/tobacco/data_statistics/tables/adult/table_2.htm
- Center for Disease Control and Prevention (2009a). Summary of Health Statistics for U.S. Adults: National Health Interview Survey, 2007, Tables 3,4. Retrieved March 31, 2009 from <http://www.cdc.gov/nchs/fastats/asthma.htm>
- Center for Disease Control and Prevention (2009b). Summary of Health Statistics for U.S. Children: National Health Interview Survey, 2007, Table 1. Retrieved March 31, 2009 from <http://www.cdc.gov/nchs/fastats/asthma.htm>

- Center for Epidemiology and Research (2003). The New South Wales adult health survey 2002. N.S.W. Public Health Bulletin 14 (Suppl S-4):1-148.
- Center for Science in the Public Interest. (2009). Retrieved August 12, 2008 from <http://www.cspinet.org/>
- Cullen, M. R. (1987). The worker with multiple chemical sensitivities: an overview. *Occupational Medicine*, 2(4), 655-661.
- Cullen, M. R., Pace, P. E., Redlich, C. A. (1992). The experience of the Yale occupational and environmental medicine clinics with multiple chemical sensitivities, 1986-1991. *Toxicology and Industrial Health*, 8(4), 5-19.
- Davidoff, A. L., Keyl, P. (1996). Symptoms and health status in individuals with multiple chemical sensitivities syndrome from four reported sensitizing exposures and a general population comparison group. *Arch Environmental Health*, 51, 201-213.
- Death in the west*. (1983). [Television broadcast]. United Kingdom. Pyramid Films.
- 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*, 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*, 37; 1676-1680.
- Equal Employment Opportunity Commission. (2009). Retrieved May 1, 2009 from http://www.eeoc.gov/ada/amendments_notice.html
- Equal Employment Opportunity Commission. (2009). Retrieved May 1, 2009 from <http://www.eeoc.gov/policy/docs/902cm.html>
- Environmental Health Network, (2002). Fragrance-Controlled Workplace. *Brigham and Women's Hospital Personnel Policy Manual, VH-110*. Retrieved from <http://users.lmi.net/wilworks/ehnhompg/bwhosp.htm>
- Environmental Protection Agency. (2008). Indoor air facts No 4 (revised) Sick Building Syndrome. Retrieved October 31, 2008 from <http://www.epa.gov/iaq/pubs/sbs.html>
- Environmental Sensitivities Research Institute. Retrieved September 3, 2008 from <http://www.esri.org/>
- Federal Workers Compensation Conference. (2006). Retrieved September 15, 2008 from <http://www.fedwccconference.com/>
- Fiedler, N., Maccia, C., Kipen, H. (1992). Evaluation of chemically sensitive patients. *J Occupational and Environmental Medicine*, 34(5), 529-538.
- Fisher, B. (1998). Scents and Sensitivity. *Environmental Health Perspectives*, 106, pp.106-112. Retrieved August 28, 2008 from <http://ehp.niehs.nih.gov/docs/1998/106-12/focus.html>
- Fleischer, C. (2007). NaturalNano's halloysite nanotubes fragrance loading capability validated by one of the world's leading personal care and household product companies. Retrieved September 13, 2008 from <http://www.azonano.com/News.asp?NewsID=5511>
- 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*, 47; 78-85.
- Fumento, M. (2000). Senseless Scent Patrol. *The Washington Times*, May 7, 2000.

- Greenberg, L. (1999). *Fragrance: A City Smells Perfume and Holds Its Nose*. *Wall Street Journal*, NY. July 28, ppB.1.
- 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. Retrieved September 13, 2008 from www.noharm.org
- Hunt v. St. Peter School, 963 F. Supp. 843, (W. D. Mo 1997).
- Isaacs, S., Knicicman, 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). Retrieved September 27, 2008 from <http://www.jan.wvu.edu/media/fragrance.html>
- Kendall, J. (1997). *Twenty Most Common Chemicals Found in Thirty-one Fragrance Products*. Distributed by Environmental Health Network. Retrieved September 27, 2008 from <http://users.lmi.net/%7Ewilworks/ehn20.html>
- Kipen, H. M., Hallman, W., Kelly-McNeil, K., Fiedler, N. (1995). Measuring chemical sensitivity prevalence: a questionnaire for population studies. *American Journal of Public Health*, 85(4), 574-577.
- 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*, 370, Issue 9584, 28 July 2007- 3 August. pp 336-341.
- Kotowski, C. (2007). Smells like a lawsuit: Sensitivity to fragrances as a disability. Retrieved Septemebr 27, 2008 from <http://www.laborlawyers.com/showarticle.aspx?Ref=list&Type=1119&Cat=3386&Show=9>
- Kosta, L. (1998). *Fragrance and Health*. Human Ecology Action League, 161.
- Kurt, T. L., (1995). Multiple chemical sensitivities: a syndrome of pseudotoxicity manifest as exposure perceived symptoms. *Clinical Toxicology*, 33(2), 101-105.
- Lessenger, J. (2001). Occupational Acute Anaphylactic Reaction to Assault by Perfume Spray in the Face. *Journal of the American Board of Family Practice*, 14(2), 137-140.
- Lax, M. B., Henneberger, P. K. (1995). Patients with multiple chemical sensitivities in an occupational health clinic: presentation and follow-up. *Arch Environmental Health*, 51, 425-431.
- Lessof, M. (1997, February). *Report of Multiple Chemical Sensitivities (MCS) Workshop*, Berlin, Germany, 21-23. PCS/96.29 IPCS, Geneva, Switzerland. *Human and Experimental Toxicology*, 16, 233-234.
- Lieberman, M. S., DiMuro, B. J., Boyd, J. B. (July 1995). Multiple chemical sensitivity: an emerging area of law. *Trial*, 31.n7,pp. 22(10).
- Long, A. (2007). Asthma Prevalence Rates and Employer-Paid Costs. *Medical News, Inc*. July. Retrieved September 30, 2008 from <http://www.medicalnewsinc.com/news.php?viewStory=60>
- Marsh, B. (1998). No scents is good sense. *OH&S Canada*. Jan/Feb, 14(1), p.26.

- Massachusetts Nursing Association Online (2007). Fragrance Free! Creating a safe health care environment. Program, #2006003. Retrieved September 21, 2008 from http://www.courseserver.com/mna/certificates/mna_certificate_r2.asp?courseid=9
- McBride v. City of Detroit, No.07-12794 (E.D. Mich. Nov.28, 2007).
- Media Awareness Project. (2009). Retrieved May 13, 2009 from <http://www.mapinc.org/resource/>
- Meggs, W. J., Dunn, K. A., Bloch, R. M., Goodman, P. E., Davidoff, A. L. (1996). Prevalence and nature of allergy and chemical sensitivity in a general population. *Arch Environmental Health*, 51(4), 275-282.
- Mooser, S. B. (1952). The epidemiology of multiple chemical sensitivities (MCS). *Occupational Medicine*, 2(4), 663-81.
- North Dakota Compensation Commission. (1994). North Dakota Supreme Court Opinions. Retrieved September 30, 2008 from <http://www.courtstate.nd.us/court/opinion/930298.htm>
- Office of Environmental Health and Safety. (2005). Scent free awareness resources. Retrieved September 30, 2008 from <http://ehs.kenyon.edu/ScentFreeAwareness.html>
- OSHA (2004). Retrieved August 21, 2008 from <http://www.osha.gov/Publications/OSH-ACT-reprint-3-09-04.pdf>
- Pitman, S. (2007). US woman sues over fragrance toxicity. Retrieved August 28, 2008 from <http://www.cosmeticsdesign.com/Products-Markets/US-woman-sues-over-fragrance-toxicity>
- Randolph, T.G. (1952). Sensitivity to petroleum including its derivatives and antecedents. *Journal of Laboratory and Clinical Medicine*, 40, 931-932.
- Rehabilitation Act of 1973, Section 7, 29 USC Section 706.
- Rosen, M. (2005). *Delivery system handbook for personal care and cosmetic products*. William Andrew: Norwich, NY.
- 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.
- Salvador, L. (2007). McBride sues over perfume in the workplace: banning fragrances & cigarette smoke to improve health. *American Chronicle*. Retrieved August 28, 2008 from <http://www.americanchronicle.com/articles/view/31679>.
- Salvador, L. (2009). The impact of a sweet fragrance, *California Chronicle*. Retrieved August 28, 2008 from <http://www.californiachronicle.com/articles/view/103675>
- Shannon, R. (2006). Scent-free schools, universities, churches, medical offices, businesses, etc. Retrieved October 1, 2008 from <http://medicine-dot-org.ning.com/profiles/blogs/scentfree-schools-universities>
- Schim, C. & Williams, M. (1986). Effects of odors in asthma. *American Journal of Medicine*, 80:18-22.
- Singer, N. (2008). The sweet smell of nothing. *New York Times*. Retrieved September 2, 2008 from <http://www.nytimes.com/2008/02/14/fashion/14skin.html>
- Smith, S. (2007). The Right to Breathe Clean Air. *Occupational Hazards*. Cleveland: 69(11); 6.
- Steinemann, A. (2004). Prevalence of Multiple Chemical Sensitivities: A Population-Based Study in the Southeastern United States, *American Journal of Public Health*. Washington: 94(5), pp.746-747.

- Steinemann, A. (2007). Laundry Fragrances, Air Fresheners May Have Dangerous Toxins, Retrieved August 12, 2008 from <http://www.emaxhealth.com/5/23479.html>
- Steinemann, A. (2008). What's in Common Household Products? *Journal of Environmental Impact Assessment Review*. 29(1), Jan., pp.32-38.
- Stratton, L. (2007). The Sweet Smell of Office Pollution, *St. Petersburg Times*, FL., March, 18.
- Terr, A. I. (1986). Environmental illness: a clinical review of 50 cases. *Arch Internal Medicine*, 146, 145-149.
- 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. Access Board, July 26, 2000. Retrieved September 7, 2008 from <http://www.access-board.gov/about/policies/fragrance.htm>
- U.S. Department of Labor, Office of Disability Employment Policy, 2006. Employees with fragrance sensitivity. *Job Accommodation Network document*. Retrieved September 12, 2008 from <http://www.jan.wvu.edu>
- U.S. Department of Labor, OSHA facts – August 2007. Retrieved September 5, 2008 from www.osha.gov/as/opa/oshafacts.html
- U.S. Environmental Protection Agency. Indoor Air Quality and Work Environment Study: multivariate statistical analysis of health, comfort, and odor perceptions as related to personal and workplace characteristics. Vol. 4, 21-M-3004, 32-33, June 1991.
- U.S. Environmental Protection Agency. (2009). "An Introduction to Indoor Air Quality." Retrieved March 10, 2009 from <http://www.epa.gov/iaq/voc.html>
- U.S. Food and Drug Administration. (1994). Retrieved September 3, 2008 from <http://www.cfsan.fda.gov/~dms/cos-labl.html>
- U.S. Food and Drug Administration (2003). Retrieved September 3, 2008 from www.fda.gov/fdac/features/2003/203_asthma.html
- U.S. Food and Drug Administration (2005). Dockets FDA., 99P-1340. Retrieved September 3, 2008 from http://www.fda.gov/ohrms/dockets/dockets/99p1340/99P-1340_emc-000577.txt
- waysandmeans.house.gov (2003) Retrieved March 27, 2009.
- Wolff, P. (2005). Improving indoor air quality in health care settings by controlling synthetic fragrance: What you as a nurse can do. *The Maryland Nurse*, Feb-March, 7-9.
- Ziem, G. E. (1992). Multiple chemical sensitivity: treatment and followup with avoidance and control of chemical exposures. *Toxicology and Industrial Health*, 8(4), 73-86.
- Ziem, G., McTamney, J. (1995, September 20-22). *Profile of patient characteristics: chemical injury and sensitivity*. Experimental Approaches to Chemical Sensitivity (presentation). Princeton.