ENVIRONMENTAL TOBACCO SMOKE

ANSWERS TO THE MOST ASKED QUESTIONS

Introduction

Until fairly recently, the debate concerning cigarette smoking focused exclusively upon the health of the smoker. During the past few years, however, the smoking-and-health controversy has expanded to include claims that environmental tobacco smoke ("ETS") or "passive smoking" can affect the health of nonsmokers. The organized antismoking community has advanced such claims with great vigor, using them to support demands for a "smoke-free" society.

Unfortunately, the scientific facts often have been obscured or ignored entirely in discussions of ETS and nonsmoker health. The objective of this brochure is to present the relevant facts in as objective and even-handed manner as possible, leaving the reader to reach his or her own conclusions concerning the appropriateness of smoking restrictions based on health concerns.

The discussion that follows is in a question-and-answer format. That approach permits us to respond to what we believe to be the most asked questions about ETS. Should you have additional questions or want a copy of any background or source materials, please feel free to contact us at --

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QUESTION: What is environmental tobacco smoke? Is it the same as "passive smoking"?

Environmental tobacco smoke ("ETS") is the smoke that comes off the end of a burning cigarette plus the smoke that is exhaled by the smoker. Before anyone is exposed to either form of smoke, however, tremendous dilution occurs with room air. The major components of ETS are water (which is what makes ETS visible, like steam) and carbon dioxide (which is the substance people exhale with normal breathing).

The term "passive smoking" is misleading. ETS is not the same as the mainstream smoke inhaled by smokers. Although exhaled mainstream smoke is one of the components of ETS, the smoke begins to age -- and undergo physical and chemical changes -- immediately upon leaving the cigarette. Similarly, mainstream smoke and the smoke that comes off the end of a burning cigarette are different from both a physical and chemical perspective, in part because they are produced at different temperatures. Further, tremendous dilution occurs with room air before anyone is exposed to ETS. Finally, and in contrast to active smoking, people are exposed to ETS primarily through the nose, with its built-in filtering mechanism. It seems clear that the phrase "passive smoking" would never have been coined by the organized antismoking community, which developed and first began to use the phrase, were it not for the phrase's emotional content.

QUESTION: How much ETS will I inhale if I am in a room with a smoker?

Scientists have attempted to answer that question by measuring the components of room air with and without smoking. What they have found, not surprisingly, is that smoking does not significantly affect the level of most chemicals in the air. There are two reasons for this finding. First, there are many different sources for most of the chemicals found in ETS. Second, the amount of each chemical contributed by those other sources generally far exceeds the contribution from ETS.

One notable exception is nicotine in air, which -- so far as is known -- comes exclusively from cigarette smoking. Research (including research in restaurants, shops and offices in Hong Kong) has shown, however, that a nonsmoker would have to spend several hundred hours in a typical room in which smoking is occurring before being exposed to the nicotine equivalent of a single cigarette. Furthermore, the levels of airborne nicotine that have been found in indoor air have always been far below established limits for nicotine exposure.

Some people may worry, of course, about being exposed to any ETS at all. Logically, though, that worry -- however irrational -- should extend to all products of combustion (charcoal grill smoke, smoke from fireplaces, cooking, automobile exhausts, etc.) as well as to the countless other sources of airborne chemicals. As noted, virtually all of the substances found in ETS will be in the air from sources unrelated to smoking. Further, many of the substances in ETS also are found in food and in water. The human body has quite natural ways of getting rid of trace amounts of such substances after they have been taken up. If that were not so, life as we know it would not be possible.

QUESTION: The Government says that cigarette smoking is hazardous to the smoker's health. Doesn't that inevitably mean that ETS is hazardous to the nonsmoker, albeit perhaps to a lesser extent?

No. As already noted, nonsmoker exposure to ETS differs from active smoking in a number of important respects -- including the chemicals involved, the route of exposure and, perhaps most importantly, the extent of exposure. Moreover, the Government's position concerning active smoking is based largely upon population studies finding an association between the incidence of a number of diseases and being a smoker. In contrast, the population studies that have focused on ETS generally have failed to find even a statistical association between nonsmoker ETS exposure and disease.

The only exception is the incidence of respiratory problems among children, younger than school age, having at least one parent who smokes. It is not known, however, whether that association is due to ETS or to a variety of so-called confounding factors (for example, differences in pre- or post-natal care, cross infections, proximity to industrial or urban pollution). More research needs to be done in this area. What seems clear, however, is that exposure to ETS at an early age has no long term effect. After the age of five or so, there are no discernable differences between children who live with smoking or non-smoking parents.

It should be noted, morever, that the present uncertainty concerning very young children cannot be relied upon to support workplace smoking restrictions, the primary focus of antismoker attention. The reason, of course, is that

infants and very young children tend not to spend prolonged periods in the office workplace.

QUESTION: Aren't some people allergic to tobacco smoke?

It is sometimes said, or presumed, that some people react allergically to tobacco smoke. But scientists have not been able to identify substances in ETS that might be responsible for such a reaction. Consequently, the existence of a real allergy to ETS seems highly doubtful. In fact, even asthmatics, who tend to be unusually sensitive to airborne contaminants, rarely react to ETS -- even in clinical settings in which the levels of ETS have been inflated artificially.

We would, however, hasten to add one other point. If permitted to accumulate to excessive levels, ETS can be irritating -- to smokers as well as nonsmokers. But a variety of practical steps can be taken to deal with that situation, far short of banning or severely restricting smoking. The answer to the irritation some people report when exposed to ETS lies, of course, in improved ventilation -- coupled, on occasion, with a modest rearrangement of workstations or seating areas. The primacy of ventilation as the first line of defense against air quality problems lies in its capacity to dilute and reduce virtually all indoor air contaminants to acceptable levels.

QUESTION: Is ETS an important or serious indoor air pollutant?

The United States Government as well as private firms specializing in indoor air quality have surveyed a substantial number of so-called "sick buildings" to develop a profile of causes. Inadequate or poorly maintained ventilation systems have been found repeatedly to be the predominant cause of the discomfort and health problems that result in buildings being classified as "sick buildings," with excessive levels of bacteria and fungi, chemicals from exterior sources, formaldehyde from carpets and furnishings and a variety of other pollution sources adding to the problem. Excessive levels of tobacco smoke have been found to be a contributing cause in only two to four percent of the buildings studied, and the preferred remedy in those few cases has been improved ventilation.

In places like Hong Kong, the quality of the air indoors is affected significantly by the quality of the air

outdoors. That was demonstrated in a recent study of ambient and indoor air quality in Hong Kong, published in a major international scientific journal. One of the primary findings of the study was that pollution from motor vehicles tends to overwhelm other outdoor and indoor pollution sources in Hong Kong. This finding underscores the importance of filtration, particularly in the case of buildings located in highly polluted areas, as an adjunct to good ventilation.

QUESTION: I know that carbon monoxide gas is poisonous. Wouldn't a smoke-filled room contain dangerous levels of carbon monoxide?

ETS does contain carbon monoxide but the amounts are so small that an awful lot of smoke would be required before the amount of carbon monoxide contributed by ETS would even be measurable. Motor vehicles, gas stoves and heaters are far more significant sources of carbon monoxide than ETS.

QUESTION: I enjoy smoking at work and during my leisure time. What can I do to avoid being a nuisance to nonsmokers?

Courtesy and common sense will go far toward avoiding conflict or unhappiness between smokers and nonsmokers. As noted, good ventilation also is important. You occasionally will encounter situations, of course, where smoking should be avoided -- elevators, rooms in which flammable materials are being stored, rooms in which the ventilation is woefully inadequate are examples. In the latter situation, however, the only long-term solution that makes sense is to improve the ventilation.

Again, ventilation -- coupled with appropriate filtration -- is the key to solving the range of air quality problems that can affect building occupants. That includes indoor air components, like ETS, that one can see and smell as well as the many important components (including bacteria and fungi, the volatile chemicals and a range of gases) that cannot be readily perceived but can affect both health and comfort.

QUESTION: What is the Hong Kong Tobacco Institute doing about ETS?

The HKTI takes seriously the claims that have been made concerning ETS. We continuously review pertinent

scientific publications as they become available, and we strongly recommend that discussions of ETS be based on scientific facts -- first and foremost. We also promote tolerance and understanding on the part of both smokers and nonsmokers and, whenever appropriate, emphasize the importance of ventilation and filtration in dealing with the broad range of indoor air quality problems.