Nicotine: Addiction and Regulation

The public health and economic costs of tobacco use are well documented and staggering. Mortality emanating from smoking-related illnesses has been estimated at 419,000 persons annually (1). In 1990, the overall financial costs of smoking to society were estimated to be $2.59 per pack of cigarettes (2). Traditionally, a moat of nongovernmental regulation has enveloped most cigarette products—perhaps associated, in part, with financially rooted bonds that link the tobacco industry to various lawmakers (3-4). This industry, for instance, contributed $2.5 million to the political parties locked in the 1992 presidential campaign (2). The apparent shield of protection from rigorous scrutiny, however, may be wearing thin.

A congressional hearing, coupled with an attention-gathering letter written by the commissioner of the Food and Drug Administration (FDA), has recently added fuel to the fire long smoldering in the area of the fractious view that effective regulation of the tobacco industry is indicated (3-5).

The core issue affecting FDA movement toward the regulation of cigarette or other tobacco products as “drugs” involves the intent of the product vendor. If, for example, there is an intention by the pertinent vendor to create an addiction, then cigarettes may properly be regulated pursuant to the adjurations of the Food, Drug and Cosmetic Act because of the perceived intention to alter or affect bodily structure or function (5). However, if nicotine is present in cigarette products merely as a natural constituent of tobacco, such products may well elude the outstretched hand of FDA regulation (5).

Accusations are emerging that cigarette manufacturers, in the past, have endeavored to effectively suppress data tending to show that nicotine is an addictive agent. The FDA commissioner, particularly, has claimed that at least one tobacco company, in the 1980s, engaged in animal research pointing toward the addictiveness of nicotine and then pursued action intended to block publication of the findings (5). The maelstrom of controversy grew in intensity when a prominent member of Congress echoed a similar accusation that a cigarette company acted to bar publication of a study sponsored by the company that, reputedly, indicated the addictive nature of nicotine (6).

An appendage to the body of cigarette-vendor intent is the issue of whether tobacco companies may deliberately manipulate nicotine levels in their products to create and sustain addiction. In the course of the cigarette manufacturing process, leaves and stems are separated, the plant products are pulsed, and the pulsed products are then flattened into sheets that may be rolled to assume the customary shape of cigarettes (4). Nicotine that would otherwise be destroyed during the reconstitution process is extracted prior to pulping, and later it is sprayed back on the reconstituted tobacco sheets (3-4). Tobacco industry representatives may argue that manufacturers are merely returning nicotine that was in the tobacco prior to pulping (3,5). However, critics claim that cigarette manufacturers are all too aware of the close nexus between nicotine addiction and cigarette sales (3).

The issue of vendor intent, in sum, appears at present to be ensconced between the arms of giant pincers—a claw to the east, concerning the addictiveness of nicotine and a claw to the west, relating to concerns that manufacturers may intentionally control nicotine levels to create and sustain addiction—that are tearing at the flesh of the core issue of vendor intent. The government has incongruously pursued the disjointed policy of discouraging tobacco use while concomitantly subsidizing the tobacco industry with taxpayers’ money (2). It is difficult to elucidate any social wisdom underlying this discordant policy. Members of Congress need to step up to the plate and strive hard to solidly hit the difficult issues being pitched in the field of possible governmental regulation of cigarettes.

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References

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Hair Coloring Products: Safe or Still Suspect?

The recent study by Thun et al. (7) on hair dyes and cancer risk was well-done and demonstrates the continuing importance of the American Cancer Society (ACS) cohort. We are concerned, however, about the title (and media response) to the accompanying editorial (2), which suggests there is no reason for public health concern about using hair dyes. Indeed, Thun et al. (7) found no excess mortality from all cancers or for many specific cancer types, such as breast or bladder cancer, which have shown no relation to hair dyes in other studies (3). There were, however, associations between use of dark permanent hair dyes and risk of non-Hodgkin’s lymphoma and multiple myeloma. Although based on small numbers of cases, these results are generally consistent with previous studies (4-8) that, taken together, suggest that use of hair dyes might pose a risk for lymphatic and hematopoietic neoplasms. In the editorial, Colditz remarked on this consistency and the need for further evaluation, especially by continued monitoring of the ACS cohort. However, Colditz recommended against other major new