

Statement of Domingo M. Aviado

I am a medical doctor and professor of pharmacology at the University of Pennsylvania School of Medicine. A copy of my curriculum vitae is attached for the record.

I have spent much of my time studying the disease process called emphysema. Since the disease interferes severely with respiratory function, one can detect emphysema in test animals by measuring changes in this capability after exposure. In our own laboratory, rats and mice exposed to cigarette smoke have not developed functional or pathological signs of pulmonary emphysema.

In emphysema, as in many other diseases, the role of genetics has been under investigation. For example, one genetic defect, alpha-antitrypsin deficiency, has been identified, and, of course, there may be others. One cannot exclude the possibility that smokers who develop respiratory diseases have constitutional makeups or genetic characteristics that predispose them to acquire the smoking habit and at the same time develop respiratory disease.

Other researchers have exposed dogs to cigarette smoke through a surgical opening in the trachea. They did not measure pulmonary function but instead examined the lungs histologically. The lesions that they have interpreted as emphysema have been questioned.

With regard to coronary heart disease, there are marked geographical differences in its incidence that cannot be explained by smoking patterns. For example, the Japanese are among the heaviest smokers but have a low coronary heart disease rate.

"Tar" and nicotine in tobacco smoke have been singled out for special attention. In my native country, the Philippines, cigarettes are generally much higher in "tar" and nicotine than current U. S. brands. Yet the incidence of respiratory and heart disease is much lower than in the United States. I recognize that number comparisons

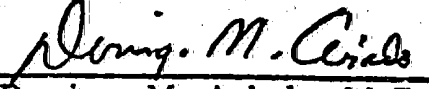
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cannot establish whether or not a causal relationship exists, but I do find it extremely interesting that while the average "tar" and nicotine content of Filipino cigarettes is 200 to 500% higher than U.S. cigarettes, the incidence of lung cancer is only 6% of that in the U.S. and the incidence of heart disease is only 4% of that in the U.S.

I would like to comment on one of Senator Hart's remarks contained in the Congressional Record regarding tobacco smoke and addiction. As a pharmacologist, I am concerned that there seems to be a growing popular belief that smoking is literally addictive. Even the 1964 Advisory Committee's report to the Surgeon General concluded that this was not correct. Further, from my review of the literature, it is apparent neither nicotine nor tobacco smoke should properly be considered addictive.

Also, I am familiar with the book upon which Senator Hart evidently based his remarks, and in my opinion, anyone reviewing the book completely would conclude that few scientists believe nicotine or tobacco to be addictive.

While I agree that good basic research is needed in many disease areas, for the several reasons which I have stated, I disagree with the implications and direction of the legislation here proposed.

  
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