

a way of controlling pollution, more particularly air pollution. There is rather frightening evidence available to support the argument that air pollution is responsible for certain birth defects. It is also thought to aggravate to the extreme many respiratory ailments and to be the very cause of some of these.

Emphysema, chronic bronchitis, asthma, lung cancer, these are some of the diseases that can be brought on or, if they already exist, can be seriously complicated by befouled air.

Dr. Max Fitch, a medical consultant to the Ontario Health Department, warned recently that air pollution is probably the most serious current health problem. He said that historical records show that the victims of severe air pollution tend to be the very old and the very young, "particularly premature infants and those with chronic heart and lung disease." In these cases death is usually the result of pneumonia or heart failure superimposed on an already damaged constitution.

Dr. Robert Stern, professor of chemistry and environmental studies at Oakland University in Rochester, Michigan, says that he now believes that unless drastic changes are made, estimates that man has only 30 years to live are "very close to true." Ten times as many people are afflicted with chronic bronchitis and emphysema as were fifteen years ago. Dr. Stanley L. Kobler, a chest physician at the Montreal Jewish General Hospital, is convinced that air pollution has some bearing on the increase.

These findings have all been corroborated at the leading chest clinics of teaching hospitals in this country. Here I am quoting other authorities rather than my own particular field that I am vitally interested in.

Three factors can lead to or aggravate diseases which cause bronchial constriction and decrease the diameter of air passages resulting in more resistance to breathing. The first is cigarette smoking; the second, air pollution, and the third, heredity. Individuals react in different degrees of intensity to the first two factors because of their heredity. It all depends whether they have a predisposition. My old dad used to smoke 12 cigars a day and inhaled them, but he never had any trouble. He was the exception.

A team of researchers under the direction of Dr. Arian Barkaver, associate professor of veterinary science at Pennsylvania State University, recently concluded experiments which demonstrated that air pollutants can produce effects in mice that might be expected to cause allergies and decreased resistance to infections. As a matter of fact, this problem of pollution now is widespread through cattle and other types of animals in our whole domain.

A study reported in 1966 showed that the English children under the age of two who were studied showed a significant increase in chest illnesses in moderately and highly polluted area. Many parts of Canada today are probably more polluted than some of the industrial regions of England. You would have to be out of your mind not to support legislation of this type. To me it is vital, particularly from a medical point of view.

[Hon. Mr. Sullivan.]

The British study involved some 4,000 children observed for more than eight years. The incidence of diseases of the upper respiratory tract were really no different for high or low pollution areas. But lower respiratory diseases such as bronchitis, bronchialitis, and pneumonia were four times as frequent for children brought up in high pollution areas compared with children in low pollution areas.

A three-year study of children admitted to the Montreal Children's Hospital showed a "significantly higher" incidence of lower respiratory tract diseases than would have been expected. The occurrence of respiratory diseases in such young people linked with the existence of air pollution may well be laying a basis for serious chest diseases in later life.

The increasing amount of small particles in the air from oil-burning furnaces, cars and industry will increase the hazards of gas pollutants like sulphur dioxide. If the particles are small and abundant enough, they can carry gases down into the deep lung—the lower reservoirs of the lungs where cigarette smoke goes—and where much of the particulate matter and gas could be retained for long periods of time with dire detrimental effects on the patient's health.

Air pollution is a potential killer and drastic measures must quickly be taken to halt its destructive cause. This Bill C-224, though it takes actual concrete steps only in matters coming within exclusive federal jurisdiction, is still a major step forward. However, though I may be pleased with the principle behind this bill, I have serious reservations with regard to certain clauses of the bill itself.

To begin with, I should like to point out that though national emission standards and guidelines are discussed throughout the bill, these standards and guidelines have yet to be set and no indication is given as to when we can expect them. But, until they are published this bill cannot be implemented. They attempted to obtain this information from the minister late Monday night on third reading, but they could not get it in the other house. How is an inspector to know whether or not buildings are meeting standards, when he has no criteria against which to judge?

I was pleased to see that an amendment accepted when this bill was in the Fisheries and Forestry Committee of the other place was one that would ensure more consultation between federal and provincial governments before the setting of specific emission standards for any work, undertaking, or business in that province.

This proposed increase in consultation is all to the good. Were the federal and provincial governments to go their separate ways this could well result in industries and other sources of air pollution being required to conform to two different sets of emission standards based, likely, on two different philosophies of controlling air pollution. For example, Ontario has for a number of years carried on a program under the Air Pollution Control Act, 1967, of using published emission standards which relate to a point of impingement. This point of impingement is not the point at which the contaminants