

**PREPARED STATEMENT OF DONALD L. RASMUSSEN, M.D., CHIEF,
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Since November 1962, I have been engaged in the physiologic evaluation of soft coal miners with shortness of breath on effort. I am a board certified specialist in internal medicine with subspecialty training in pulmonary diseases. To date, more than 3,000 bituminous miners have been evaluated in my laboratory with a battery of testing procedures, including the response to exercise and blood gas exchange.

I am here because of my concern primarily for the health of bituminous miners. My concern arises from almost daily contact with miners who suffer from pulmonary insufficiency of varying degrees. Approximately 10% of the subjects evaluated have had no symptoms. In more than half of these men, certain sensitive tests are nonetheless abnormal. Among those cases who complain of shortness of breath, approximately half suffer from pulmonary insufficiency, which significantly interferes with all but light or sedentary work.

The most disturbing observation is the number of men who are under 45 years of age and who have been employed for 15 to 25 years, who show evidence of impaired pulmonary function. Serial studies at intervals of one to three years have shown measurable progression of impairment in the majority of those men still working in the mines.

Of interest is the fact that those miners who have worked primarily at the face in mechanized operations become impaired on an average of 5 years earlier than men engaged in all other mining jobs. These face workers also show somewhat more X-ray abnormality, although there is little relationship between impairment and X-ray category of pneumoconiosis.

Disabling pulmonary disease among the bituminous miners from southern West Virginia, eastern Kentucky and southwestern Virginia, is found among miners whose x-rays reveal only "simple" pneumoconiosis and in a smaller number of cases with only diffusely abnormal, but nonspecific x-ray changes. Spokesmen for the coal industry, specialists from the University of Kentucky at Louisville and Lexington, from West Virginia University and Dr. Keith Morgan from the U.S.P.H.S. testified in February 1969, in Charleston, West Virginia, that pulmonary impairment occurred only in the presence of advanced or complicated pneumoconiosis (so-called progressive massive fibrosis). This testimony was strongly refuted by Dr. Jethro Gough of Wales, probably the world's most noted authority on pathology of coal workers. Dr. Gough clearly stated that simple pneumoconiosis of coal workers could be a disabling disease.

None of the experts from this country, whose testimony is referred to above, base their opinion on adequate evaluation of symptomatic coal miners. Their opinion is derived almost exclusively from a single study published in Britain in 1954. Were these experts to read *carefully* the 1954 British report, they would be aware of a gross error in sample selection. The magnitude of this error is sufficient to make the conclusions of the British authors entirely untenable.

Public statements made by Drs. Keith Morgan and Mark Key of the U.S.P.H.S. and Charles Andrews of West Virginia University regarding the inability of the physicians at the U.S.P.H.S. facility in Morgantown to duplicate findings on patients studied in my laboratory also deserve some comment. The U.S.P.H.S. facility in Morgantown has, in its three operational years, studied perhaps 100

or slightly more patients from the West Virginia coal fields. The excuse that the lack of a cardiac catheterization laboratory prevented more rapid study of these men is most startling. Even more startling is the fact that it was felt essential to utilize not only catheterization of the right heart, but also the unwarranted simultaneous catheterization of the left heart in some of their study cases. (The latter procedure has not been without complications in at least three of the miners studied.) In contrast to the use of these sophisticated and extreme cardiac catheterization procedures, they neglected most of the basic procedures customarily employed during exercise. In more recent studies, the U.S.P.H.S. physicians placed more emphasis on exercise studies, but neglected to perform simultaneous studies of blood gas exchange. I regret that a facility supported by federal monies should direct its efforts toward *disproving* the (sometimes misunderstood) findings, of other investigators, instead of proceeding on a positive course of much needed investigation.

The public views of the University and U.S.P.H.S. experts neglect the facts that in West Virginia, on a per capita basis, the rate of disability from pulmonary disease is one of the highest, if not the highest in the United States, and that the rate of death from respiratory causes is almost 8 times as great among coal miners ages 60 to 64 than any other occupational group in this country. The data supporting the above statements reflect conditions existing a number of years ago. It is our opinion that the present conditions in the mines will result in even more disability and death in the future.

The bituminous coal producers express pious concern for the health of the bituminous miner. At the same time, they publicize distortion and outright falsehoods in such publications as the one appended, entitled "The Real Truth About Black Lung". This was distributed to individual miners, the West Virginia Legislature, and was printed in at least one mining publication. The intent of this document was to block adequate compensation measures in West Virginia. The same tactics are being employed to block federal health legislation, particularly the setting of a safe dust level for health.

A significant reduction in dust levels in the coal mines of this country is mandatory in order to reverse the increasing respiratory disease of the miner. This can be achieved only through federal legislation, which must include rigid and forceful inspection, and enforcement provisions.

Much more research is necessary to define clearly the mechanism of disease products, development of methods for early detection of disease and additional methods of prevention. Dust control cannot await the outcome of such studies. Immediate action is essential.

[From the Independent Coal Operator, Middlesboro, Ky.]

CIGARETTE SMOKE WORSE THAN COAL DUST

(By Stephen G. Young, Vice President, West Virginia Coal Association)

Recently the spotlight has come to focus on coal workers' pneumoconiosis, morbidly referred to as "black lung." Pneumoconiosis means simply "dust in the lungs." Over a period of years coal dust, as well as any dust to which a person is exposed, builds up in the lungs. Recently on a clear day in Pittsburgh, the Bureau of Mines sampled a cubic foot of air which revealed 7,000,000 particles of dust in the 7-micron-and-below size—the microscopic-sized particles which are responsible for pneumoconiosis.

Because of modern, powerful mining machines, the coal miner is daily exposed to even more dust. Cigarette smoke is dust. One single cigarette exposes the smoker to a greater amount of dust than a miner is exposed to in three 8 hour shifts in the mines according to Dr. Wolfgang T. Ulmer, a West German lung physiologist of international renown. In addition, the nicotine paralyzes the ciliary action which ordinarily passes the particles out of the chest.

The publicized inference that 80% of soft coal miners suffer from "black lung" is a cruel and ill considered misrepresentation of fact. Even the most dismal surveys indicate that coal workers' pneumoconiosis affects some 10% to 30% of active coal miners. This figure is not far removed from the incidence of emphysema and other lung ailments suffered by the general public, especially by smokers.

The symptoms of one who suffers from coal workers' pneumoconiosis are easily confused with those caused by the other maladies suffered by the general public, such as emphysema, chronic bronchitis, arteriosclerosis and just plain old age. Nevertheless, excessively dusty conditions in mining must be eliminated, and an all-out drive to eliminate smoking among miners should be vigorously pursued by the coal industry and the United Mine Workers together.

In 1947 the average miner could expect to live to the age of 58—now he can expect to live to age 74, or four years longer than the average U.S. male. In addition to keeping the industry competitive so that the miner can have a place to earn his bread, and must keep his working conditions safe and healthy so he can enjoy the benefits of this time of plenty.

The coal industry is presently embarked on a no-holds barred effort to cut down on dust in the mines. Vacuum dust collectors are employed through hollow drill bits; coal is impregnated with water before it is shorn by longwall miners; a system of suppressing dust generated by the continuous miner is underway; and other methods of dust suppression are being studied.

To set the record straight concerning the compensability of coal workers pneumoconiosis, the following facts must be understood:

1. Coal workers' pneumoconiosis, like all occupational diseases, has been and is compensable under the West Virginia workmen's compensation law.

The West Virginia workmen's compensation law defines the term "occupational disease" to mean: "a disease incurred in the course of and resulting from employment."

2. Since the adoption of the occupational disease provisions of the West Virginia workmen's compensation statute, many non-fatal and death claims have been paid for what was, in fact, coal workers' pneumoconiosis. Most of the non-fatal claims were filed as silicosis claims and these claims were paid whether the disease was strictly silicosis or whether it in fact was coal workers' pneumoconiosis so long as there was X-ray evidence of nodulation or appropriate biopsy evidence.

Not only does the West Virginia workmen's compensation law compare favorably with the laws of other jurisdictions concerning the compensability of coal workers' pneumoconiosis, but the benefit provisions of the West Virginia workmen's compensation law are better than the benefit provisions in many other jurisdictions. For example in Pennsylvania, no benefits may be paid for coal

workers' pneumoconiosis unless the claimant is totally and permanently disabled (defined under Pennsylvania law to mean that the claimant cannot engage in any type of gainful employment) as a result of the disease, and even if there is such total and permanent disability full benefits are not payable for life. Under the West Virginia workmen's compensation law benefits are not only paid for total and permanent disability but are allowed for any lesser degree of disability or if processed as a first stage silicosis claim without any proof of disability at all. Furthermore, if a total and permanent disability award is made under the West Virginia compensation law, full benefits are payable for life.

In conclusion, from a review of the laws of other states and countries and from a review of the information available from the leading medical authorities in this country and abroad in the field of coal workers pneumoconiosis, it is clear that claimants with coal workers' pneumoconiosis fare very well under the West Virginia workmen's compensation law when compared with similar claimants in other jurisdictions.

THE REAL TRUTH ABOUT BLACK LUNG

"Let West Virginia, the first state in coal production, also be the first to formulate compensation law provisions specifically adapted to the fair and equitable determination and compensation of occupational diseases of the lungs; but let such a law be based upon sound, scientific medical knowledge, as recommended by the Council of the West Virginia State Medical Association, and not upon sensationalism and misrepresentation," said Paul Morton, President, West Virginia Coal Association.

PERTINENT QUESTIONS AND ANSWERS RELATIVE TO BLACK LUNG

Q. Why do certain people, advocating particular changes in the provisions of the compensation law respecting coal workers' pneumoconiosis (CWP) or "black lung," want those particular changes?

A. Many of them do not realize that coal workers having pneumoconiosis are already being compensated under the present law, for all disability where disability exists, and to the extent of \$1,000 even where no disability exists. Moreover, because of recent sensationalism and hysteria, many persons have jumped to "scare" conclusions, unsubstantiated by medical fact.

Q. What is the difference in compensation between disabling CWP and simple, uncomplicated CWP?

A. If a coal worker has sustained any disability from CWP, then he is fully entitled to compensation. However, if he is afflicted with simple CWP, then he is not disabled and should not receive compensation.

Q. What is CWP?

A. Coal workers' pneumoconiosis (CWP) means coal dust in the lungs.

Q. Do all coal workers have coal dust deposited in their lungs?

A. No 70 or 80% of all West Virginia and workers show no signs of dust retention.

Q. Is coal dust the only type dust found in coal workers' lungs?

A. No. Silica or sand dust is sometimes present and may cause silicosis. Coal workers and non-coal workers alike are daily exposed to more types of dusts, including particles from cigarette smoke, which may be retained in their lungs.

Q. Can coal dust in the lungs be injurious to a coal worker?

A. Yes, depending upon the amount of dust retained among other factors.

Q. What are these "other factors?"

A. Certain things which doctors term "host factors," which make one person more susceptible to CWP than another.

Q. Is CWP the leading cause of lung disability in coal workers?

A. No. Volume after volume of medical studies report cigarette smoking as the most important factor in America today in the development of lung disability.

Q. After a coal worker has worked in the coal industry and has retained coal dust in his lungs, what is effect of his health?

A. Simple, uncomplicated, uninfected pneumoconiosis is regarded as a condition compatible with reasonable health and not associated with significant dis-