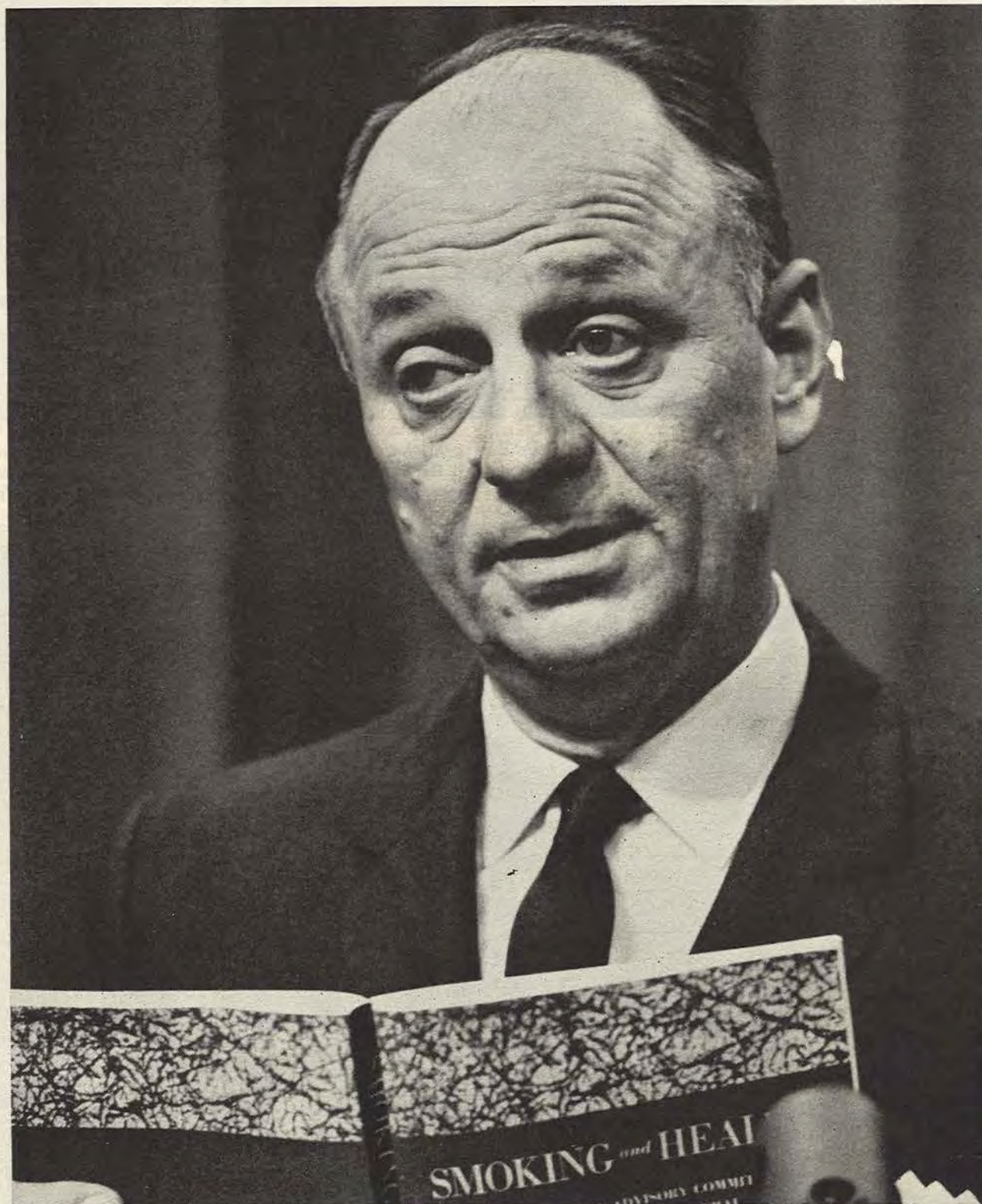


Government report nails down smoking hazards

# Verdict on Cigaretts: Guilty as Charged



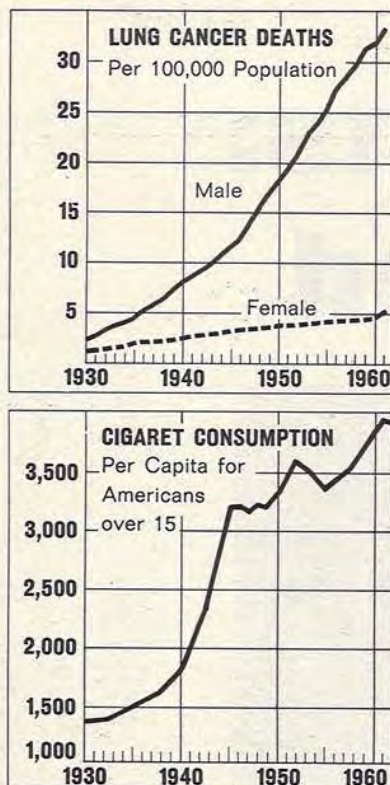
**T**he 10-man jury had been out for more than a year weighing the case against cigarettes. Now Surgeon General Luther L. Terry, holding in his hand the jury's 387-page report, announced to the nation its unanimous verdict on the cigarette: guilty as charged of being a menace to health.

Cigaretts, said the report, are a major cause of lung cancer and chronic bronchitis. And they help shorten a smoker's life in a number of other ways. This had been said before. But now it was

being said with greater authority by the Surgeon General's Advisory Committee, a group of distinguished medical men whose appointments were approved by the tobacco industry.

Many Americans had hoped the verdict would be different: tobacco people, farmers, politicians, suppliers, salesmen, advertising men—and, not least of all, the American smoker, who has mightily resisted the idea that his old and comforting friend, the cigarette, had all along been a villain.





**T**he whole controversy about smoking and health that led to the appointment of the surgeon general's committee started about 15 years ago. In the late 1940s doctors and statisticians began to notice the two spectacular increases shown in the graphs above. One graph shows the rise in the rate of lung cancer deaths since 1930—far beyond that of any other type of cancer. The other shows the rise in the consumption of cigarettes during the same period.

This striking parallel would be meaningless all by itself. But in this case it turned out that most lung cancer victims actually were heavy cigaret smokers. And lung cancer, though responsible for only 2% of all U.S. deaths, has suddenly become the most prevalent type of cancer in the American male. The cigaret-cancer link has been made more meaningful over the past decade by other studies and experiments (next page).

The rise in lung cancer among females, though considerable, is not so striking as among males. Why? No one is certain. A major reason is believed to be this: lung cancer usually develops only after 20 to 25 years of heavy smoking, and women started smoking heavily and in great numbers only comparatively recently. Even today, fewer women smoke than men. Those who do tend to smoke less heavily and inhale less deeply.

The report of the surgeon general did not resolve the U.S. smoking problem. While the committee strongly urged remedial action (see pages 62 and 64), the cigaret makers went on blending and taste-testing their products—and millions of Americans kept smoking.

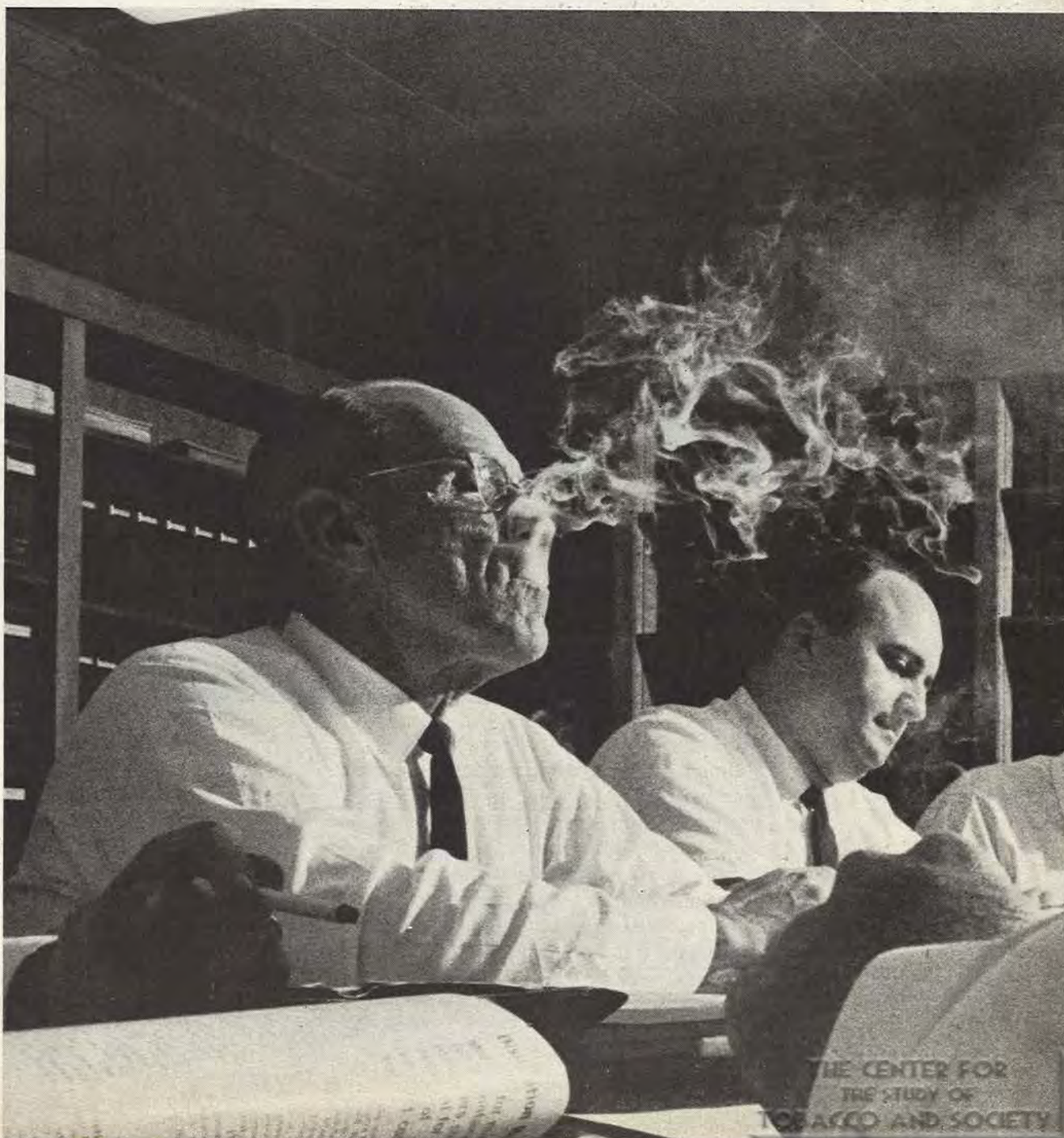
## Striking statistics spurred



**T**he members of Surgeon General's Advisory Committee on Smoking and Health are (above, from left): Dr. Maurice H. Seevers, head of pharmacology,

University of Michigan; Dr. Walter J. Burdette, head of surgery department, University of Utah Medical School; Dr. John B. Hickam, head of

internal medicine department, University of Indiana; Dr. Emmanuel Farber, head of pathology department, University of Pittsburgh; Dr. Stanhope





# committee but don't stop smokers

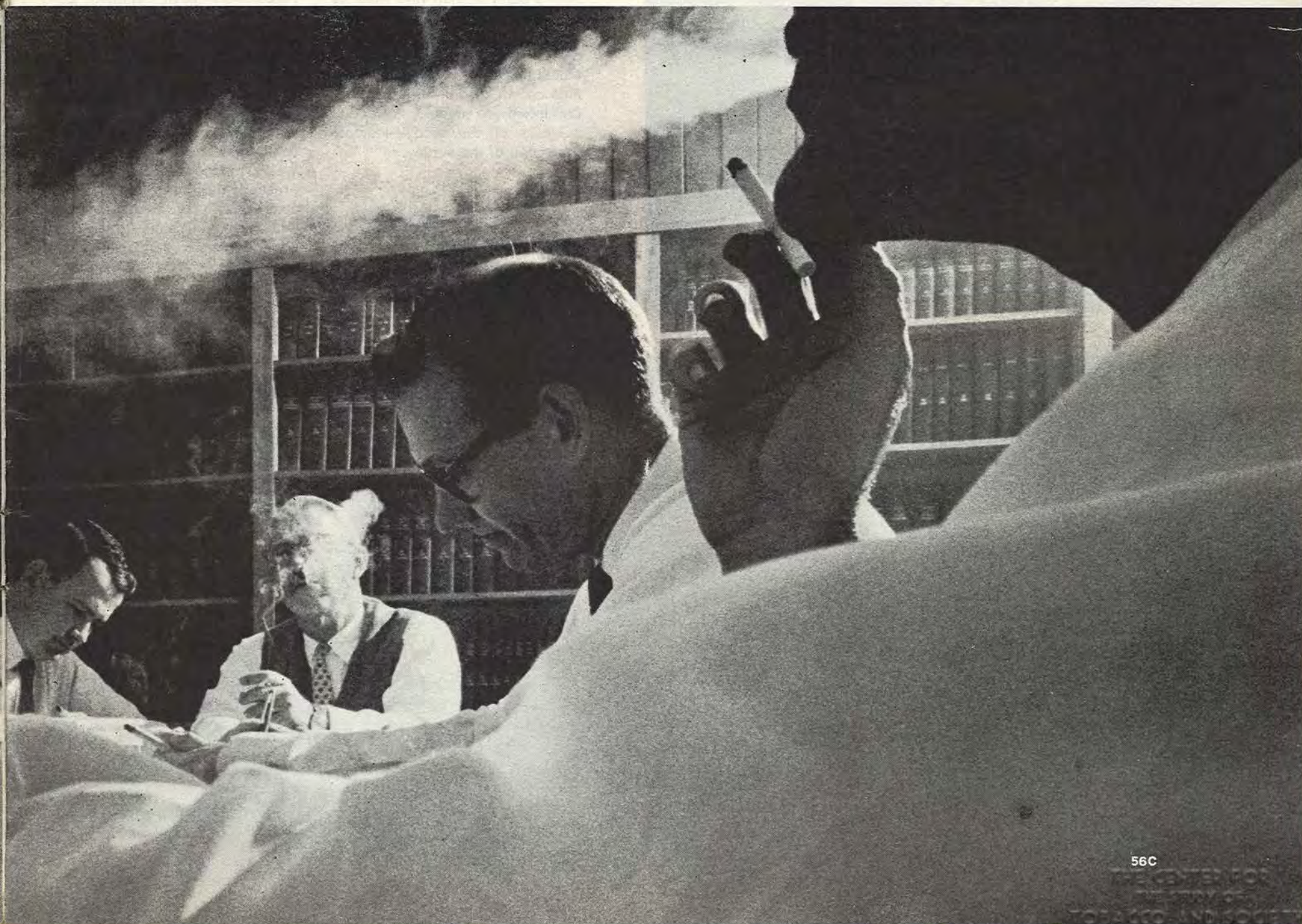


Bayne-Jones, retired dean, Yale Medical School; Dr. James M. Hundley, assistant surgeon general; Dr. Eugene H. Guthrie, U.S. Public Health

Service, committee staff director; Dr. Leonard M. Schuman, University of Minnesota epidemiologist; Dr. Charles LeMaistre, University of Texas intern-

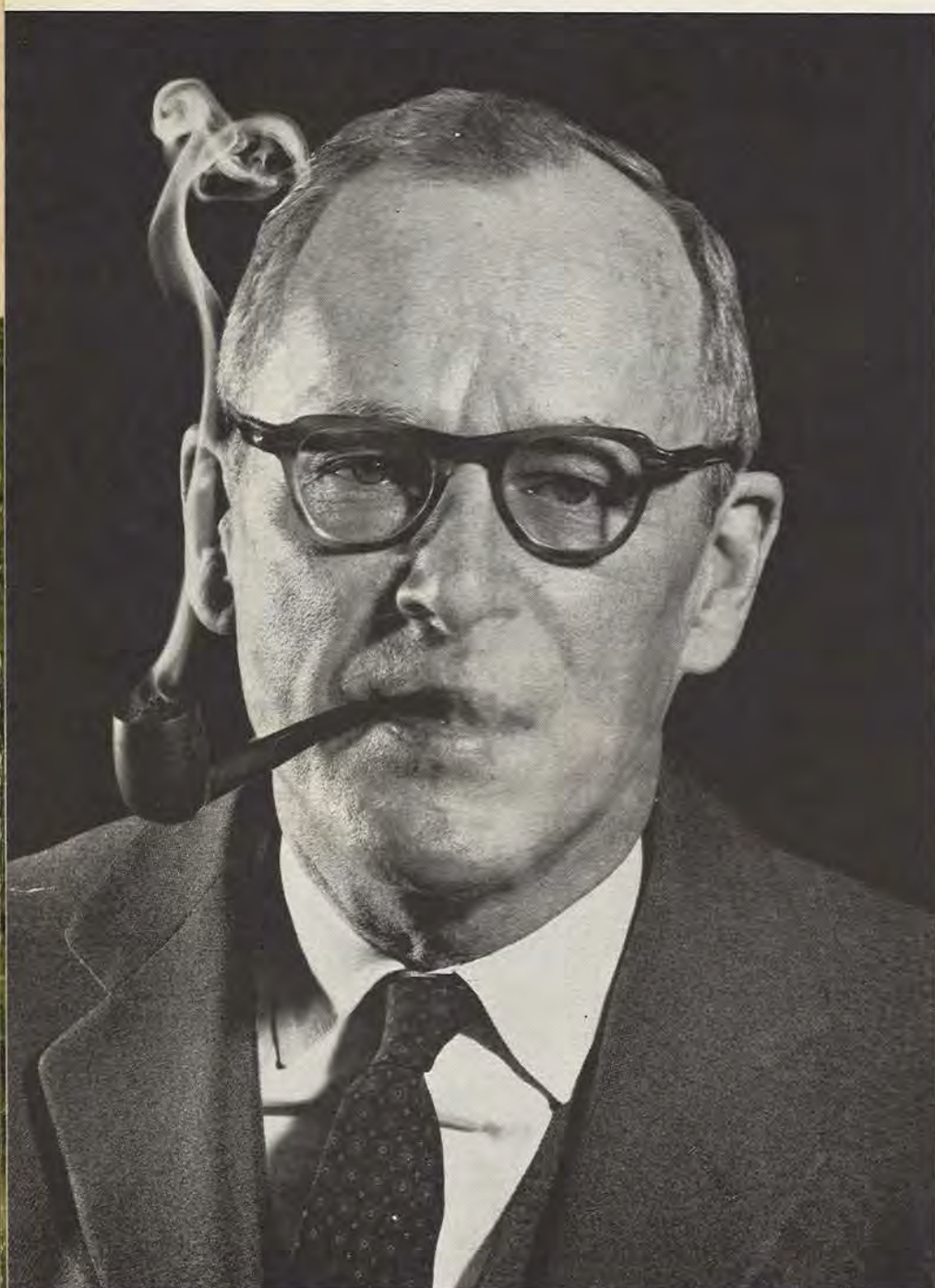
ist; William G. Cochran, Harvard statistician; Dr. Louis F. Fieser, Harvard biochemist; Dr. Jacob Furth, Columbia University pathologist.

**A**t P. Lorillard Company in Greensboro, N.C., a taste-testing panel (below) tries a new brand. John Berner, at left, is a five-pack-a-day smoker.





# One expert's convincing study



**T**he surgeon general's committee, which went through 8,000 separate studies on cigaret smoking and health, paid particular attention to the preliminary results of a study, still in progress, of 422,094 American males aged from 40 to 89. The survey was conducted by Dr. E. Cuyler Hammond (left), chief statistician for the American Cancer Society, with a major assist from a battery of computing machines. Since 1954 Hammond has been reporting large-scale statistical studies that link cigaret smoking with lung cancer. In his newest study he wanted to answer a major criticism directed at his earlier work: *i.e.*, that subjects were simply classified as smokers and nonsmokers while other factors like race, religion, education, heredity, occupation, food and exercise habits, physical characteristics and personality traits were ignored. Hammond separated out 19 factors which he thought might conceivably have affected his earlier results. He also matched up 36,975 pairs of men who were as alike as possible in every way he thought important—in race, age, place of birth, religion, marital status, nervous tension. The pairings shown below—the men photographed are models, not actual subjects of the study—indicate the scope of the survey.

No matter what the match-up, smokers fared worse than nonsmokers. Short or tall, bald or hairy headed, Negro or white, native or foreign-born, drinkers or abstainers, married or single, the death rate from all causes was about twice as high for heavy smokers (a pack a day or more) as for nonsmokers. And the lung cancer death rate ran about nine times as high.

Though Hammond's study was the latest and biggest, the surgeon general's committee used dozens of other statistical studies that showed essentially the same correlations. However, it did not base its judgment on statistics alone. It was also influenced by voluminous animal research as well as by autopsy studies.

Foremost among animal experiments was the pioneer work of Sloan-Kettering Institute's Dr. Ernest Wynder and his various collaborators. They induced skin cancer in mice by painting them with tars extracted from cigaret smoke. Since then he and other researchers have isolated and identified seven chemical substances present in cigaret smoke that can cause cancer. All taken together they still do not tell the whole story—not surprising, since no one yet has precisely pinned down *how* and *why* any substance causes any kind of cancer.

Key autopsy studies that impressed the surgeon general's committee were carried out by Dr. Oscar Auerbach of the Veterans Administration Hospital in East Orange, N.J. Lung specimens from heavy smokers clearly showed much greater damage

**P**ioneer anti-cigaret statistician is Dr. E. Cuyler Hammond of the American Cancer Society. Once a three-pack-a-day smoker, he was so impressed by data in his first report 10 years ago that he switched to a pipe.

## How Hammond Study Paired Subjects



**I**n Hammond study death rate among smoking farmers was 1,451 per 100,000, 716 for nonsmoking farmers.



**A**mong graduates of college, the death rate was 1,439 for smokers, 676 for those who did not smoke.



**A**mong short men, rate was 1,782 for smokers, 1,065 for nonsmokers; among 6-footers, it was 1,481 to 687.



# leaves another 'very doubtful'

and cell alteration than the lungs of nonsmokers. The particular kinds of damage also suggested how smoking might contribute to a variety of lung diseases—and how the lung damage might, in turn, lead to circulatory troubles and a harder-working heart—though this has never been directly demonstrated in any laboratory experiment.

It was these "many lines of converging evidence," in the committee's phrase, that led the committee to its most serious charges against cigarettes:

► **Lung Cancer:** "Cigaret smoking is causally related to lung cancer in men; the magnitude of the effect of cigarette smoking far outweighs all other factors. The data for women, though less extensive, points in the same direction."

"The risk of developing lung cancer increases with duration of smoking and the number of cigarettes smoked per day, and is diminished by discontinuing smoking."

► **Other Lung Diseases:** "Cigaret smoking is the most important of the causes of chronic bronchitis in the United States, and increases the risk of dying from chronic bronchitis," as well as from pulmonary emphysema, destruction of tiny air sacs that perform the lungs' basic breathing function.

► **Heart Disease:** "Male cigarette smokers have a higher death rate from coronary artery disease than nonsmoking males, but it is not clear that the association has causal significance."

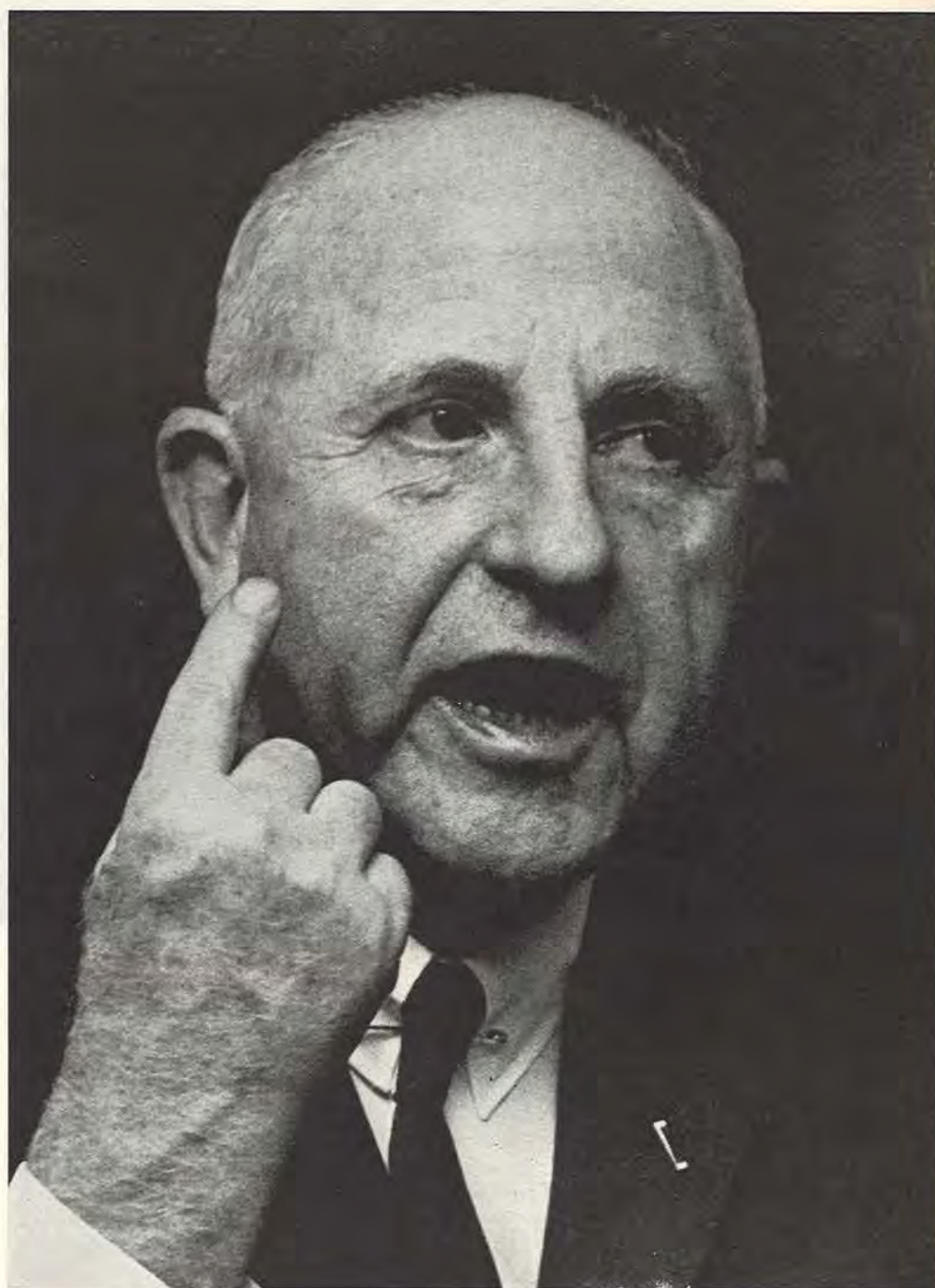
► The report emphasized the much lesser risk of smoking cigars and pipes. But it did point out that pipe smoking seems to increase

the risk of getting cancer of the lip.

► Most surprising was the verdict on nicotine. Long considered the most harmful ingredient in tobacco because it is believed to be the stimulant that gives the smoker his kicks, nicotine was found to be relatively harmless.

**B**ut the report and its conclusions are already being challenged by scientists as eminent as any on the surgeon general's committee. Though few in number, these critics have persistently refused to accept the evidence against cigarettes as conclusive. An outspoken dissenter is Dr. Joseph Berkson of the Mayo Clinic, one of the nation's leading medical statisticians. Berkson has repeatedly challenged Hammond's studies, partly on the grounds that his population samples were not truly representative of the whole population. He and others have also pointed out that the incriminating statistics have never been backed up by conclusive laboratory proof—e.g., lung cancer has never been induced in any experimental animal by the inhalation of cigarette smoke alone. Berkson's objections were carefully considered by the committee and answered to its own satisfaction. Berkson, however, still believes it "very doubtful that smoking causes cancer of the lung."

**A**nti-report statistician is Dr. Joseph Berkson of the Mayo Clinic. He is one of a small but outspoken minority who insist that the case linking cigarette smoking with lung cancer remains essentially unproven.



**A**mong men who exercised often and heavily the death rates were 998 for smokers and 474 for nonsmokers.

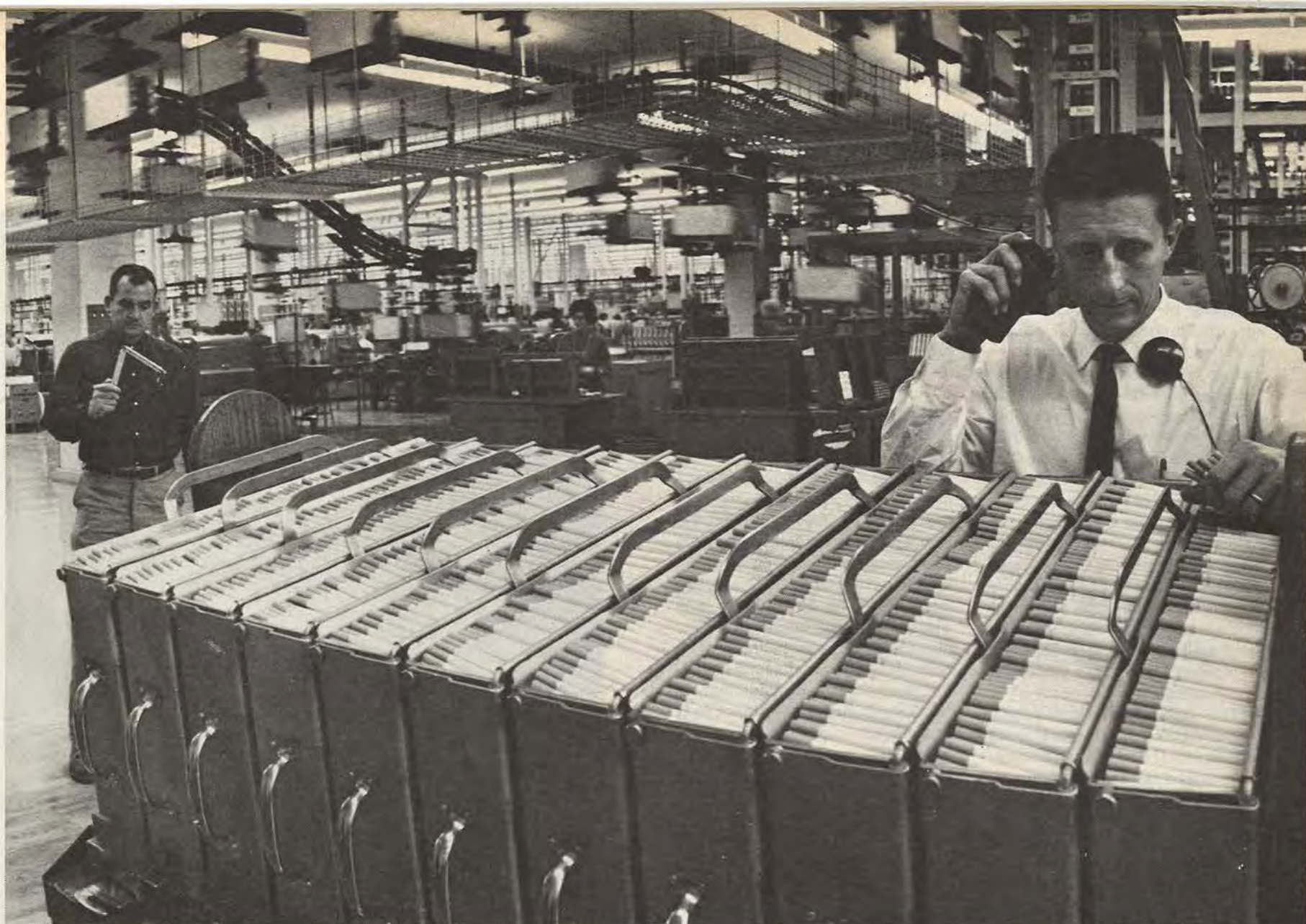


**A**mong men with a history of serious illness, death rates were 3,120 for smokers, 1,916 for nonsmokers.



**A**mong bald men, known to have good male hormone levels, rate was 1,614 for smokers, 903 for nonsmokers.





## A huge industry is now looking for

**T**obacco has played a major role in the American economy ever since colonial days, when it was a main reason for settling the South. Last year some 70 million Americans bought 523 billion cigarettes. The tobacco industry today is an \$8 billion-a-year business, and more than \$3.3 billion of its revenues goes for taxes. Tobacco is the nation's fifth largest cash crop, raised by 750,000 farm families in 21 states.

So far, despite the repeated medical reports linking smoking with lung cancer, cigaret sales have continued to climb, except for one slight dip in 1953-1954 after the first reports came out. Though the industry has never acknowledged that smoking is a health hazard, it has set up its own Tobacco Industry Research Committee headed by an eminent scientist, and has also spent millions expanding its own research facilities. Company scientists have been trying to isolate and identify possibly harmful substances and find ways to filter them out. Three fifths of all cigarettes sold now have filter tips. But do filters really protect the smoker? The surgeon general's committee says there is no evidence one way or the other.

Filters have not been on the market long enough to evaluate their worth properly. There is no doubt that some of the filters do remove at least some of the harmful tars and gases from cigaret smoke.

Though the industry is understandably worried, it seems highly unlikely that the surgeon general's report will have any catastrophic economic effects. For one thing, most confirmed smokers will probably go on risking uncertain hazards in exchange for certain pleasures. For another, many smokers who kick the cigaret habit will probably turn to tobacco in some other form.

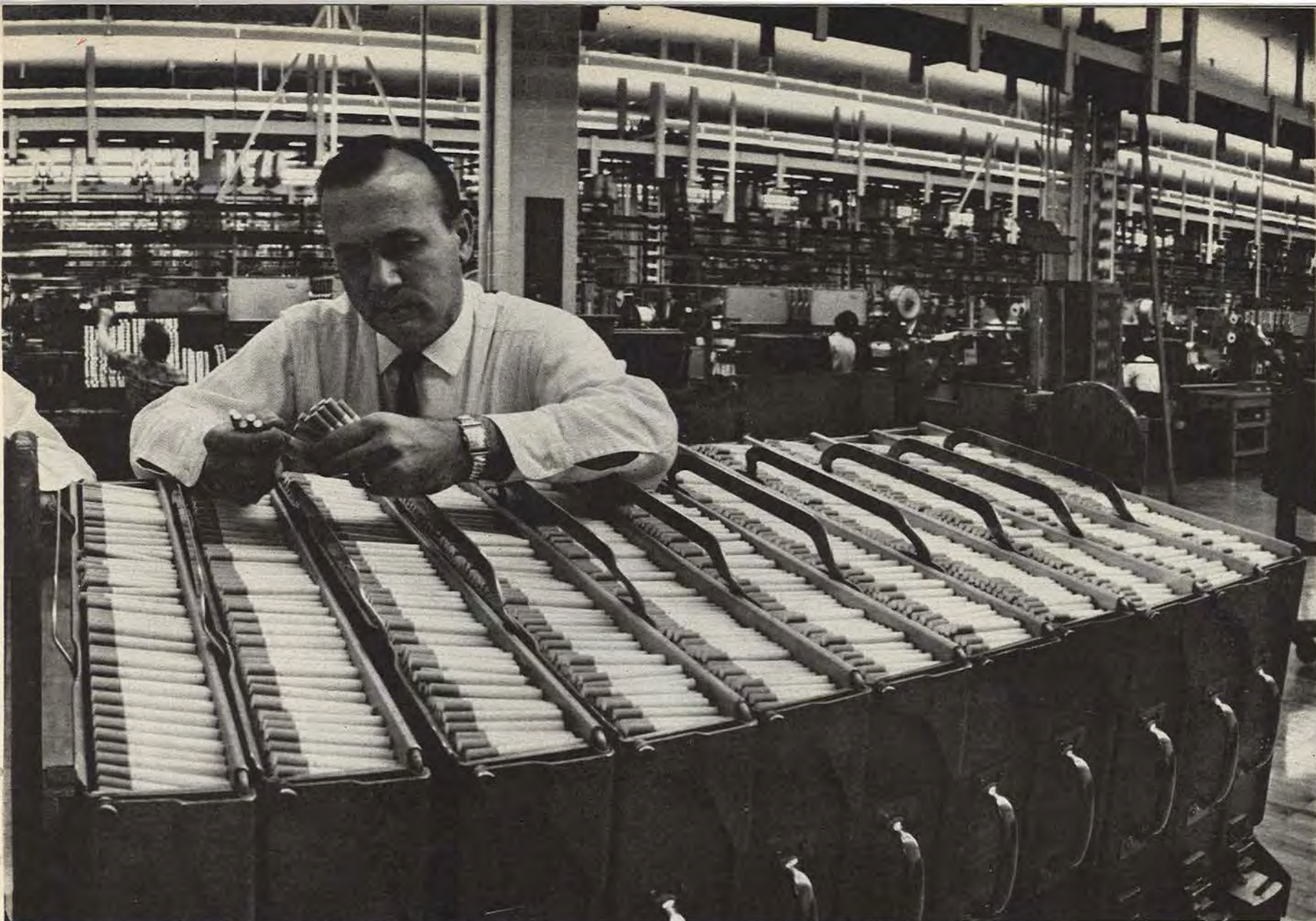
A few small manufacturers, as well as Roswell Park Memorial Institute, a cancer research center in Buffalo, have been experimenting with cigarettes made of such things as lettuce and cabbage. But a cabbage cigaret tastes just the way you would expect a cabbage cigaret to taste. And it has yet to be shown that it is any safer to smoke cabbage than tobacco.

**E**xposed to gases in smoke, tiny hairlike cilia on lining of sewed-down rabbit trachea were paralyzed. Finding led to new Liggett & Myers filter.



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In R. J. Reynolds plant in Winston-Salem, N.C. the factory manager and a foreman inspect part of plant's output of 250 million cigarettes a day.

## remedies



At P. Lorillard Co. lab cigarettes are smoked by machines which collect smoke and condense it to solid form so chemists can analyze contents.

Nicotine—being distilled here from tobacco samples at Liggett & Myers lab—was, surprisingly, exonerated by committee as major health hazard.

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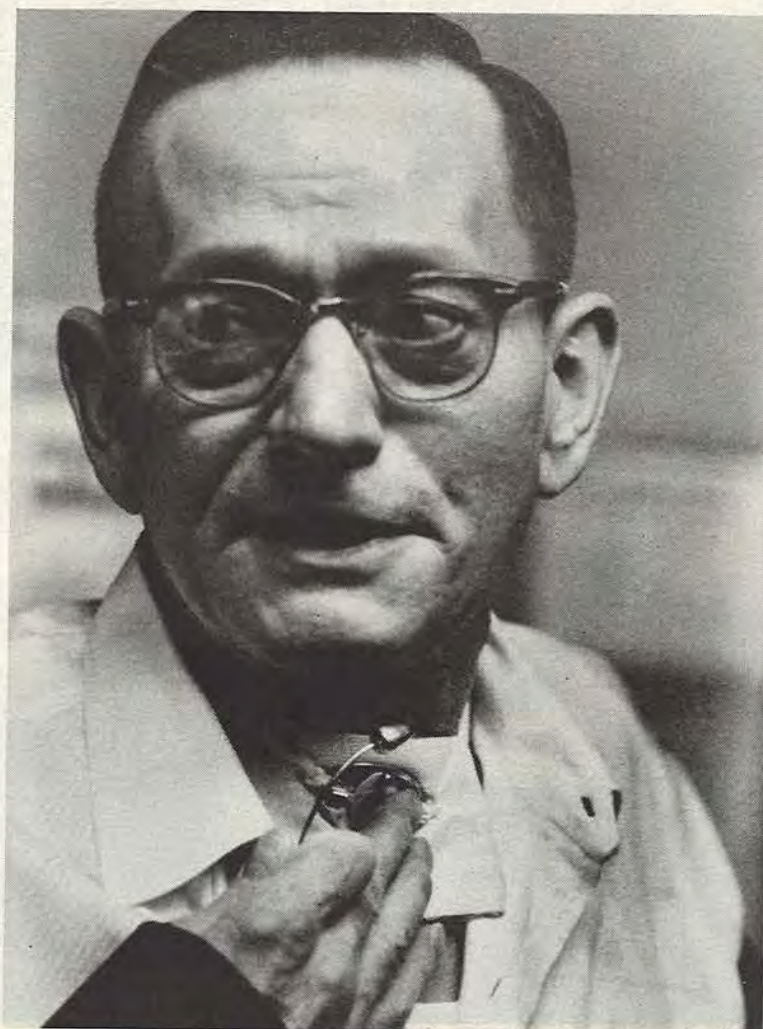
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# Scary example helps smokers quit

**E**ven before the surgeon general's report was issued, doctors and local organizations in many parts of the country were conducting clinics to help people stop smoking. One such clinic is offered every Tuesday night in Allentown, Pa. by Dr. David S. Bachman, head of a group called Cigarettes Anonymous. One of Bachman's favorite demonstrations is to call in Charles Kratzer (right), a 59-year-old interior decorator who suffered from near-fatal emphysema, which both he and his doctor blame on smoking. It got so bad that he had to have a tube stuck into his trachea to help get air to his failing lungs. "If you're lucky," Bachman says to the audience, "you'll get a disease that'll kill you. Emphysema is a slow dying, a slow drowning." As Charlie talks in a thin, breathless voice and demonstrates his plight (even now he has only 30% use of his lungs), he evokes horrified reactions.

Clinics like this one are bound to increase in number and popularity now. Meanwhile, those who fear cigarets but don't want to give up smoking altogether are—like the lady on the opposite page—carrying out some experiments.



**T**rying to decide whether to switch to a pipe or cigars, June Battes (right) walked into a New York tobacco shop to try both. After puffing on a small cigar she finally decided on a new kind of pipe styled for ladies, even though her friend said it made her look like Mammy Yokum.

**A**t Cigarettes Anonymous clinic in Allentown, Pa., Charles Kratzer (left) reveals the aluminum tracheotomy tube stuck in his throat—the price, he says, of having smoked too much. Jerome Knauss and Mary Sienkiewicz (below) watch aghast. Both were heavy smokers who have now kicked the habit. Knauss wants to set a good example so his children won't smoke.









# And now: What to do? Who should do it?

**T**he report was in and the next question was: who is going to do what about cigarettes? The committee called for "appropriate remedial action" and Surgeon General Terry promised "there will be no foot-dragging" in this matter. He was not yet ready, however, to suggest any specific remedial action, nor did the report make any suggestions. The omission was deliberate. Committee members had been asked only to judge whether cigarettes did or did not constitute a menace to health. They had been explicitly enjoined from recommending any action.

The most obvious thing to do, of course, would be to outlaw cigarettes. This is exactly what the city council of Eastland, Texas did after the report came out. But, the mayor admits, "our ordinance is probably not enforceable." A bank president on Long Island forbade his employees to smoke anywhere except in the washroom, but all he seems to have accomplished is to increase the frequency of trips

to the washroom. Since 1907 Illinois has had a law on the books forbidding the sale of cigarettes, but no one has ever paid any attention to it.

The prohibition of smoking, like the prohibition of alcohol, simply does not work. Besides, what legal grounds are there for outlawing smoking? The report itself takes pains to label smoking a habit—like the drinking of coffee—rather than an addiction, such as the overpowering compulsion involved in taking narcotics.

Adults certainly have a right to smoke if they want to, regardless of risk. It has even been suggested that the elimination of smoking would be a bad thing. For most smokers, cigarettes fill a variety of needs—relief of tension, a means to fill in time and do something with the hands, an aid to sociability, sheer sensual pleasure. If smoking stopped, Psychiatrist Howard N. Cooper has said, "we might well have a nation of more alcoholics, more fat people who

eat too much, more gum-chewers, more nail-biters, more people who simply talk too much."

**S**enator Maurine B. Neuberger of Oregon, a long-time crusader against smoking and author of a recent book called *Smoke Screen*, has a concrete proposal: "that we make certain no adult chooses to smoke without full knowledge of the risks."

How, exactly, do you make people aware of the risks?

Many people would contend that the wide publicity given to the surgeon general's report is enough to make everyone aware of the risks. Senator Neuberger insists Congress must act. There are now eight bills pending, two of them her own. Some bills would make the Food, Drug and Cosmetics Act applicable to all smoking products, giving a government agency broad powers over the production and marketing of cigarettes. Others would also require all cigarette ads, as well as every

pack of cigarettes, to carry a clear warning of the health hazards, giving amount of tar and nicotine in every pack and other figures indicating filter efficiency.

Chances of getting any of this legislation through soon are slim. Representatives of many southern states, which are dependent on tobacco, will fight hard against any anti-smoking laws. And there are many honest qualms about whether this is a matter for legislation at all.

A number of government agencies are already equipped to take on, at least in part, the smoking problem. The Federal Trade Commission, for example, has many ways of controlling labeling and advertising—and may jump in quickly now to apply these powers to cigarettes. If they set up new rules, the tobacco companies can, if they choose, defy the rules, forcing the FTC to bring the case to court—a process certain to be long drawn out.

The mere labeling requirements might not be resisted by the industry. As a matter of fact, the American Tobacco Company has just brought out a new brand of cigarettes with the tar and nicotine content printed right on the package. But tobacco companies would be far more reluc-

CONTINUED



**"What's this? A 12-pound Personal Portable? And you say the screen measures 11" diagonally? Yes. Go on... It delivers the brightest picture—inch-for-inch—of any set G.E.'s ever built? Hmmm. Front-mounted controls, I see—  
ok, what else do I get for my \$99.95\*?"**

**"You get a lifetime guarantee\*\* on the circuit board, sir. And you can get two Personal Portables for \$199.90\*!"**

\*Optional with dealer. (All-channel UHF \$119.95.)  
\*\*The General Electric Company guarantees the Etched-Circuit board to be free of manufacturing defects for the lifetime of the television receiver. The General Electric Company will, at its option, repair any defects or accept claims for such repairs provided repairs are made by one of the following: a. General Electric Distributor, b. Franchised General Electric Dealer, c. Authorized Independent Service Agency. The picture tube is warranted for one full year in all receivers. All other parts are warranted for 90 days in monochrome receivers and one year in color receivers.

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# Now... extra relief for head cold miseries



## Vicks announces **TRI-SPAN** Amazing new 12-hour decongestant tablet with extra medication to give you extra relief

Vicks Tri-Span is specially made with *extra* medications—not just one but two decongestants plus a special pain reliever—to relieve nasal congestion, pain and achiness of a head cold fast. And decongestant relief lasts up to 12 full hours.

Tri-Span has a fast acting outer shell that gives you *extra* medication—not just one but two decongestants plus a special ache-and-pain medication missing from the leading 12-hour capsule.

Tri-Span has a continuous action inner tablet that gives you *extra* medication—long-lasting decongestant medications missing from the leading 4-hour tablet.



For extra relief for head cold miseries get amazing new **TRI-SPAN**

## CIGARETS CONTINUED

tant to label cigarettes "hazardous."

Whatever the government does, private organizations like the American Cancer Society and the American Heart Association are certain to intensify their anti-smoking activities.

There will be a special effort to keep young people from taking up the smoking habit. "Freedom of choice," says Senator Neuberger, "presupposes mature judgment, which children cannot possess; and, because cigarette smoking is clearly habituating, the choice made during adolescence to smoke cannot easily be undone." The American Cancer Society has provided nearly half the nation's secondary schools with filmstrips and other material that warns children of the risks from smoking. The society has also been using athletes like Bob Mathias, Bob Cousy and Whitey Ford to convince kids they can be better athletes if they don't smoke.

A main effort will be to stop advertising that makes smoking attractive to youngsters—as the "manly" or "sophisticated" or "grown-up" thing to do. Now that the report proves smoking is hazardous, it may also seem—to youngsters—the "daring" thing to do. Tobacco companies have already quit advertising in many college newspapers. The crusade against youngsters' smoking will surely demand—and get—still more results.

One direct outcome of the surgeon general's report will be a rapid acceleration of research—by the government, by private institutions and by the tobacco companies themselves. Everyone assumes that no matter how strongly they are warned most smokers will keep right on smoking. This being the case, much of the research will be directed toward making cigarettes safer—a perfectly

feasible aim, according to Sloan-Kettering's Dr. Ernest Wynder, one of the first scientists to carry out a statistical study linking cigarettes and cancer. Wynder believes that "some elements of the tobacco industry have already made good progress" in this direction with their filters.

Filters can never become truly effective, however, until scientists know what needs to be filtered out. The substances so far identified as harmful do not begin to account for the total harm done. So the quest for the guilty substances will be speeded up. There are bound to be surprises, too. One of them occurred last week when Harvard scientists announced that radioactive polonium may be a factor in causing lung cancer. Polonium does not come from fallout; it is present in the soil and tobacco absorbs it. No one is sure how it acts in the body, but two-pack-a-day smokers have six times as much polonium in their urine as nonsmokers do.

Added to the pile of worries about sales, advertising and research which the surgeon general's report wrought for the tobacco industry is one more major worry: lawsuits. Lung cancer victims and their families are already suing tobacco companies for large amounts of money, claiming cigarettes were responsible for their condition. Now the report's unequivocal pronouncements may make it much harder for companies to defend such cases. This possibility alone could lead the tobacco industry to go along with labeling and advertising restrictions that the government may ask. The position then will be that if a man has been fully warned of the hazards, right on the package, anything that happens to him is his own fault.

As part of regular program at Mineola, L.I. school, science teacher Samuel Nemerick warns eighth-graders of smoking risks.



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