EMPHYSEMA: The Facts About Your Lungs

Emphysema is on the increase. In eleven recent years deaths from this disease almost tripled. Over 20,000 Americans die of it every year.

Who Gets Emphysema?

Persons with emphysema are, for the most part, males between 50 and 70 years old. Women get emphysema, too, but not as often as men. A very high percentage of the people who have emphysema smoke cigarettes and have been heavy smokers for many years.

How It Attacks

The thing that usually brings the patient to his doctor is that he has begun to feel short of breath on exertion in morning or evening or both. He may think he has asthma or heart disease.

The lung on the left is the normal lung of a nonsmoker; note its color and size. Contrast it with the right lung, which came from a smoker. Note the black carbon; the increase in the lung's size indicates emphysema.

Effects of Emphysema

Emphysema may begin with only a slight morning or evening inconvenience in breathing. Next, a short walk may be enough to bring on an attack of breathlessness. It may reach a point where every breath requires a major effort.

Treatment

Doctors can help emphysema patients live more comfortably with their disease. Different treatments, including antibiotics, help different patients at different times. Under a doctor's care, most patients can get relief from their attacks of breathlessness.

If a man's job does not require heavy physical labor, his doctor will usually say that he can continue to work. It is very important for the patient to stop smoking to help avoid further irritation and lung damage.

People with emphysema, with the help of breathing retraining, carefully selected exercises, and aid in keeping their lungs clear of excess fluids, can learn to make the best use of the breathing capacity they have.

Prevention

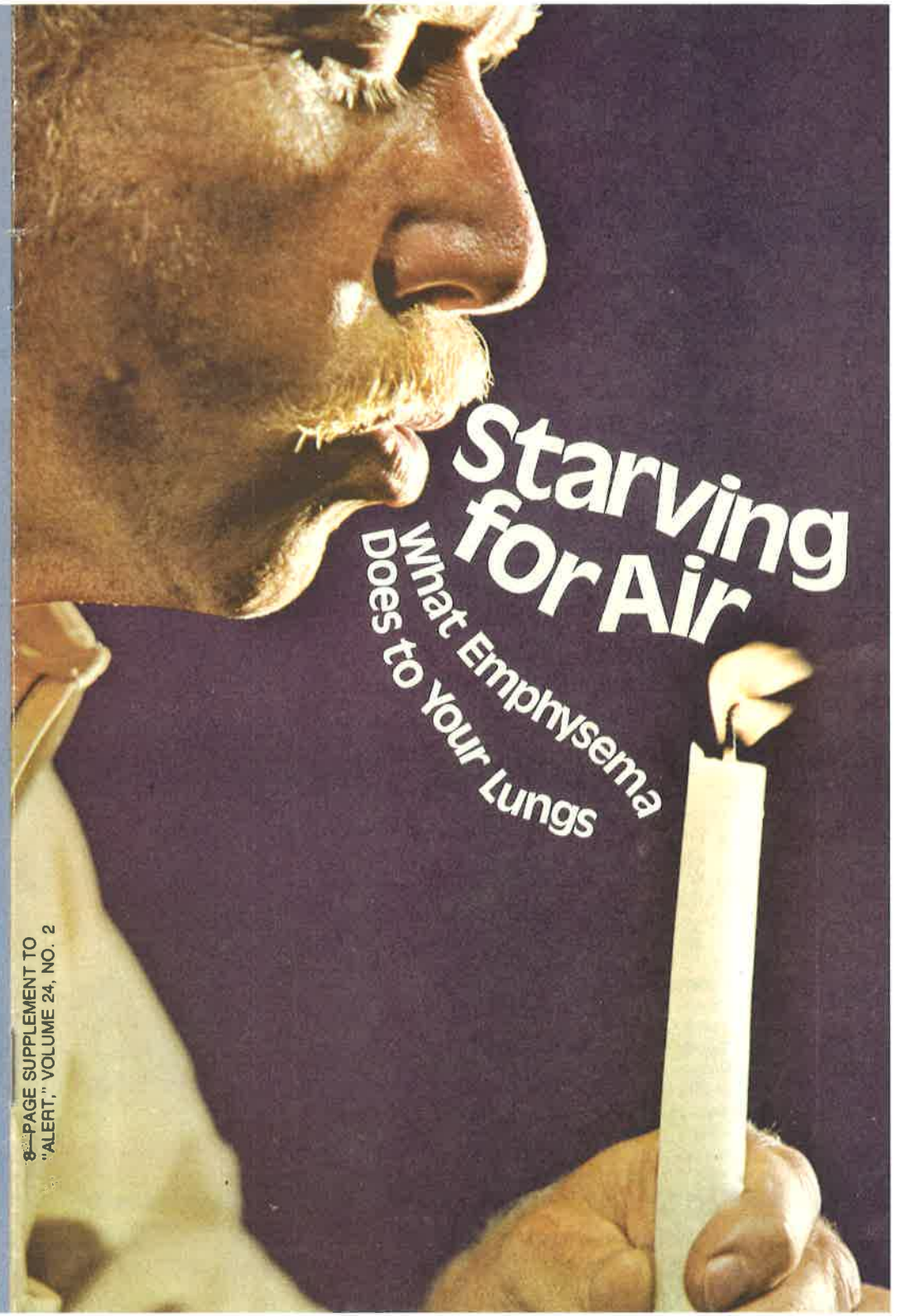
Continuing research is being conducted to find answers to many questions about this disease, but doctors do know that cigarette smoking is a definite cause, and that cutting out smoking can avoid damage for many who would otherwise develop the disease. Controlling air pollution can also help.

Modern medicine can usually slow down the progress of emphysema if patients are treated early. It is always the doctor's immediate concern to clear up any infection or irritation of a patient's respiratory system, because these things set up a possible starting place for emphysema.

Photos on page 1, D. Tank; 2, Joan Walter; 2–3, Dr. Albert E. Hirst; 4–5, Dr. James Nelson; 6–7, Dr. Oscar Auerbach; X rays courtesy of radiology department, Washington Adventist Hospital; 8, Dr. Albert E. Hirst, Medical Consultant, Dr. J. D. Mashburn, chief of pathology, Washington Adventist Hospital.

Supplement to ALERT, Vol. 24, No. 2. Quantities are available from Narcotics Education Service, 148 Fox Valley Road, Wahroonga, NSW 2076, Australia. Single copy 20 cents plus postage. Prices for large quantities on application.

SIGNS PRINT

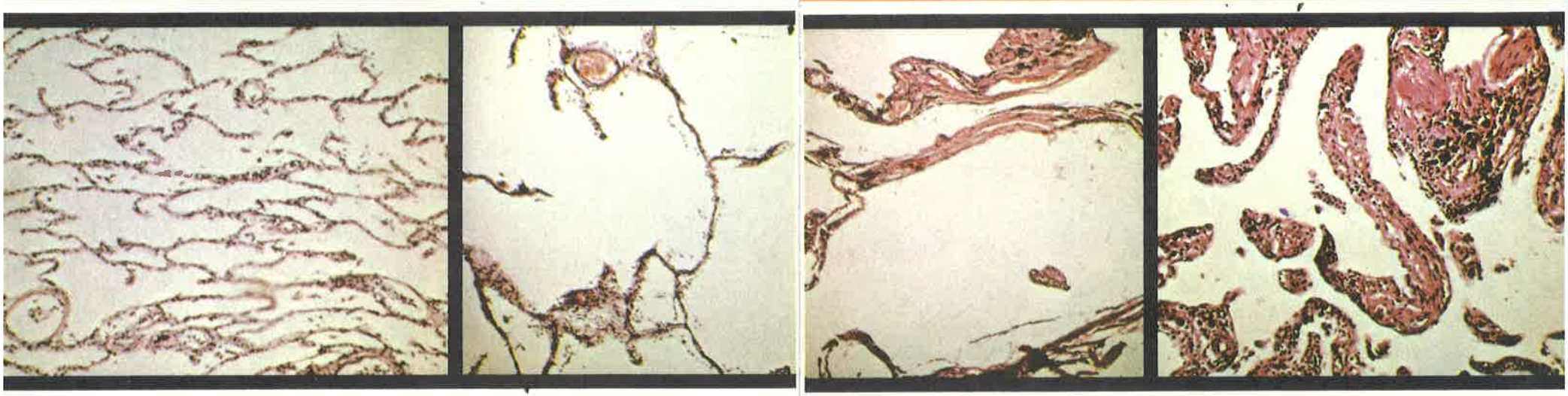


Starving for Air

What Emphysema Does to Your Lungs

8-PAGE SUPPLEMENT TO "ALERT," VOLUME 24, NO. 2

Learning to Live With Emphysema



These microscopic slides show the progression from a normal lung to that of a smoker with severe emphysema. The first shows a nonsmoker's normal air sacs with thin walls. In the second, note how smoking has caused dilated air sacs with early thickening of the walls. Marked dilated and ruptured air sacs appear in the third. The sac walls have moderate thickening. In the final microscopic slide, note the marked thickening and scarring of the air sac walls.

Emphysema is a painful disease, particularly in the later stages. There's no doubt that many people with emphysema suffer more than those with lung cancer, simply because it's a very slow death. All the time the poor patient is gasping for air.

At first that shortness of breath is hardly noticeable. But gradually it gets worse, and eventually the victim has to limit his physical activities. Added to the physical discomfort is the psychological agony, the feeling of not being able to do anything significant as a result of marked physical limitation.

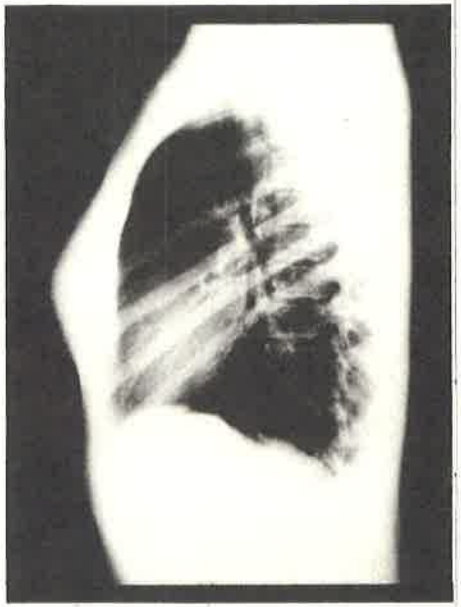
A person with advanced emphysema must learn to live with his condition. A more effective method of breathing, using abdominal muscles and diaphragm, can help. He is encouraged to exhale slowly, pushing the air out between pursed lips much the way a successful long-distance runner does.

If at all possible, a person with emphysema should be active and hold a job. Motivation is extremely important, and with his physician's encouragement, an emphysema patient may even be able to come out of retirement to take a light job. Sometimes a person with only 10 percent lung capacity remaining is working, while another, with 40 percent, doesn't feel well enough to leave the house.

Because community air contamination aggravates the symptoms of emphysema, large cities should issue daily pollution count, similar to the pollen count published during the hay fever season. When pollution is high, emphysema patients should remain relatively inactive.

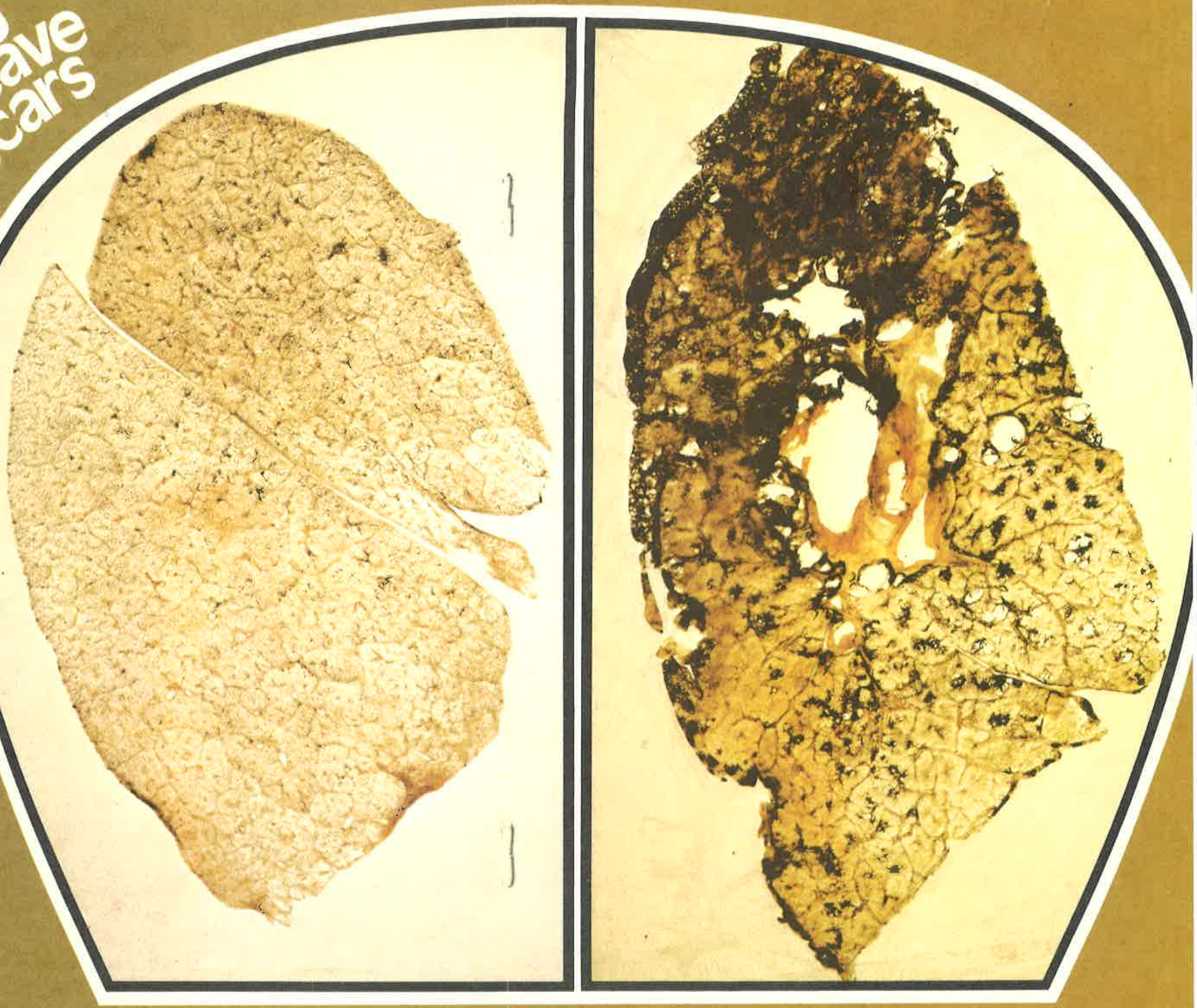
Small meals rather than heavy ones are recommended for individuals with emphysema, because overloading the stomach can interfere with breathing. Although doctors are not sure exactly why, people suffering with emphysema are ten times more likely to also have peptic ulcers.

It's not fun to have emphysema, and the prognosis for patients with advanced cases is not good. It's far better to avoid the problem than to try to treat it later.



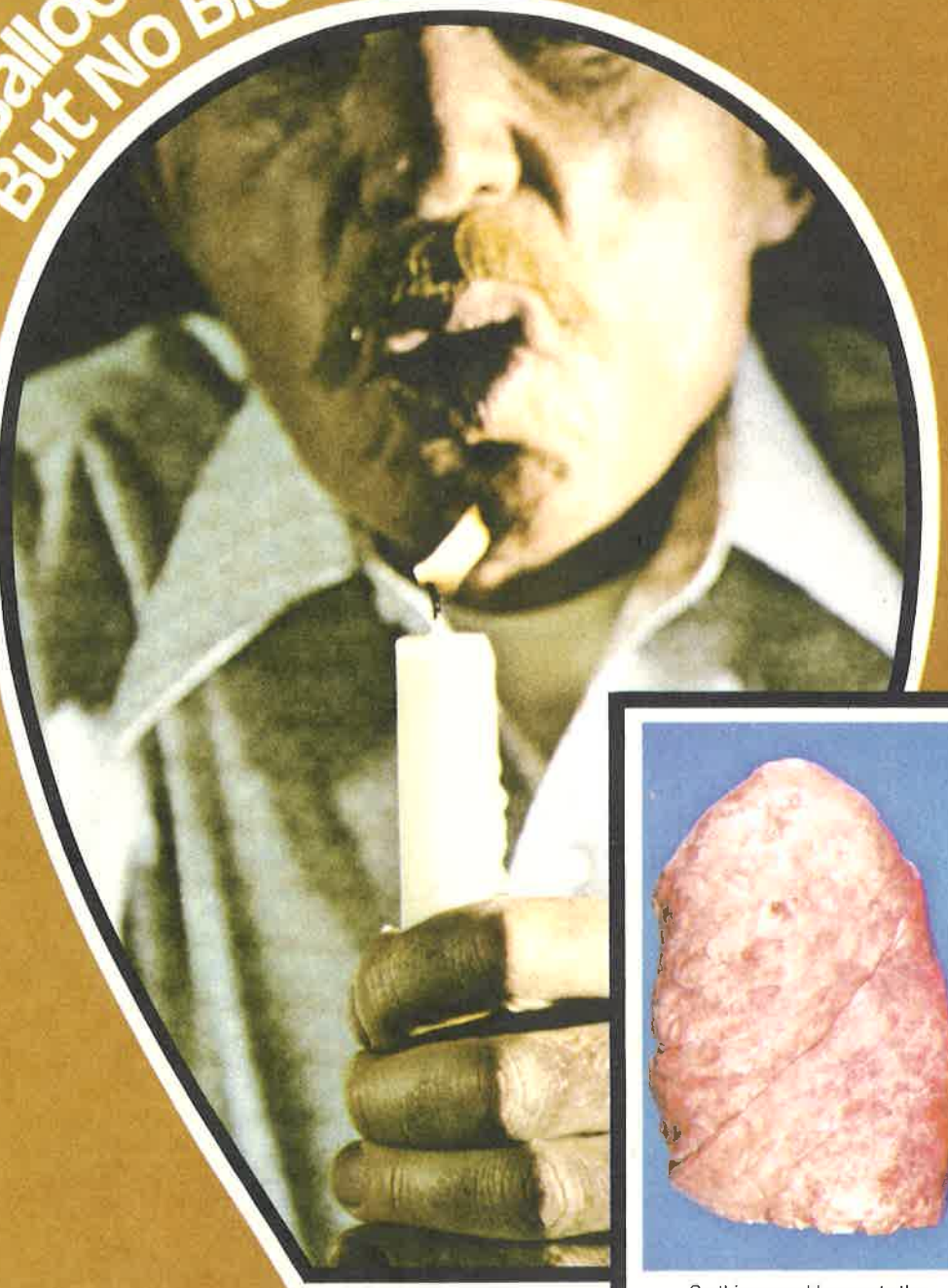
The left X ray shows a lateral view of a normal female chest. Note the diameter of the chest and the curve of the diaphragm at the bottom of the chest. The right X ray shows a lateral chest view of a male with severe emphysema. Note the marked increase in the diameter of the chest and the flattening of the diaphragm at the bottom of the chest.

Ballooning Air sacs Leave Ugly scars



These are contrasting photos of a cross-section of a healthy and an emphysematous lung. The cut surface of the normal lung shows the fine, even distribution of the normal air sacs. The cut surface of the smoker's lung shows marked irregular

Ballooning Lung Sacs, But No Blow Power



Blowing out a candle. Such a simple act. You probably attempted it on your first birthday. Can you still do it?

If you have to admit that you have trouble blowing out a candle, you may have emphysema. It takes a person with advanced emphysema longer than normal to exhale, so he does not have enough air force to extinguish the flame.

Many smokers today are becoming more concerned about the effects of emphysema than of cancer. Approximately 10 percent of heavy smokers develop some type of cancer, but *most* heavy smokers develop a certain grade of emphysema.

One lung specialist says that 99 percent of his patients are smokers. A few people inherit a pre-emphysemic condition, but the principal cause of this painful—and killing—disease is the self-pollution of cigarette smoke.

Emphysema starts with a chemical bronchitis. Smoking causes an increase in certain chemicals in the lung tissue, which destroys the walls of the air sacs, causing scarring and the enlargement of the spaces. The usually fine mesh of the lung becomes coarser. This means that there is less surface area for the absorption of oxygen.

Emphysema takes a number of years to develop. Although few people under 50 have it, the average age of emphysema victims is getting younger, probably because many people are taking up smoking at a young age.

Emphysema cannot be cured. Real damage to the lung by emphysema cannot be repaired. The broken, overstretched air sacs cannot regain their effectiveness. Lung transplants are not a reasonable hope at this time, either.

However, in the early stages of the disease many of the effects are reversible. If a person stops smoking, the lining of his lungs recovers, and the swelling in the air tubes goes down. The tubes open up again so that they can move air in and out of the lungs evenly. Recovery can be good.

On this normal lung note the light pink color and the soft, billowy surface.

The next three photographs show emphysematous lungs. On the first, note the black discoloration, which is carbon from smoking, and the irregular ballooning and scarring of emphysema. The second is a closer shot. The final photograph is a close-up of a single large bleb of emphysema.