

man who does not smoke at all is 90% less likely to develop the disease, while the man who smokes more than 35 cigarettes runs twice the risk. Cigar and pipe smokers were found to run approximately the same risk as the smoker of 16 to 34 cigarettes.

Men who consumed more than six ounces of whisky a day were found to be seven times as likely to develop larynx cancer as non-drinkers who smoked approximately the same amount, that is, more than 16 cigarettes a day. No significant differences in relative risk were found among those who smoked the same amount but who did not drink at all, who drank beer or wine or who drank six ounces or less of whisky a day.

The investigators advanced the theory that while heavy use of tobacco may cause or initiate larynx cancer, they believe heavy alcohol intake enhances the tobacco's effect probably by making the tissues more susceptible. This theory is based on the fact that although the risk becomes greater for the heavy smoker who drinks more than six ounces a day, there is no difference in risk for those who drink varying lesser amounts.

More cigar and pipe smokers were among the larynx cancer group than among the lung cancer group. Alcohol was found not to be a factor in the development of lung cancer.

Science News Letter, June 18, 1955

#### PSYCHOLOGY

## Promotion May Cut Ideas

➤ A YOUNG man is often rewarded for an outstanding achievement by promoting him to an important executive position.

The wisdom of doing this was questioned by Dr. R. H. Felix, director of the National Institute of Mental Health, in *Science* (June 3). Dr. Felix himself has just passed his 51st birthday.

Taking a young man from the ranks of the do-ers and putting him in an administrative job may rob the world of creative ideas, Dr. Felix pointed out. Scientific studies have shown that novel and significant ideas are developed at an early age.

"Shortening of the period for the kind of work in which novel ideas develop is not the ideal way to cultivate creativity," he said.

At the same time, the executive post might be better filled by a mature person, he indicated.

"A mature leader," he said, "is generally a constructive person who has experienced the various development phases. His goals are clear, his thinking is realistic. . . . The working climate under such a person is generally very wholesome. He cultivates the talents of his group and, in turn, graciously accepts their support.

"When crises arise, they are met with a minimum amount of over-reaction and contagious disturbance.

"Much of the popular thinking about the deterioration of abilities with age simply

#### MEDICINE

## Try Drugs After Surgery

➤ IN THE future doctors may give cancer patients doses of radioactive gold or other radioactive chemicals after the cancer has been removed by operation or destroyed by X-rays or radium.

This treatment might save lives now lost to cancer "seeds" that spread through the body to kill even when the original cancer has been destroyed.

The new treatment was suggested by Dr. Horace Goldie of Meharry Medical College, Nashville, Tenn., on the basis of mouse studies by himself and associates.

The studies showed that cancers kill the animal mainly by one of two means: 1. they break blood vessels and cause fatal hemorrhage; or 2. they eat away vital organs like the liver, lung or pancreas and destroy their essential functions.

The size of the cancer, Dr. Goldie says, is not as important as its site. Cancer spread is a more dangerous enemy than cancer growth. The unpredictable damage to vital organs and death are caused by seeds (metastases) that escape from the original tumor to establish hidden colonies in distant parts of the body.

These cancer "seeds" can be overtaken

and destroyed in the mice by such chemicals as radioactive gold, chromic phosphate or yttrium phosphate. Normal cells are not harmed by the radioactive substances in doses that killed the cancer cells.

White blood cells, the body's scavenger cells, could carry the radioactive chemicals, usually without apparent injury to the white cells, a report from the American Cancer Society, which supports Dr. Goldie's research, stated.

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does not rest on established fact. Many older workers who have maintained an active interest in a subject for many years are able to draw on an accumulation of personal knowledge and experience, which is not a part of the background of the younger worker."

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#### METEOROLOGY

## Miniature Tornadoes Made in Small Box

➤ A WEATHER Bureau meteorologist is making miniature tornadoes in a small box in the hope of learning more about what causes "twisters."

Dr. Neil B. Ward of the Bureau's Fort Worth, Tex., office told the American Meteorological Society meeting in Kansas City, Mo., of his experiments with baby tornadoes of various sizes.

He controls the whirlers' sizes by changing the area of the diaphragm in the top of the box through which the air is evacuated to form the tornado. Talcum powder is used to make the funnel visible.

Scientists have made tornadoes in miniature off and on for the last 50 years. Dr. Ward's model differs from previous ones in that he controls the size of the evacuating diaphragm.

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