

MEDICINE

Smoking Affects Heart

Heart disease has been linked to smoking. However, the question still unanswered is whether smoking itself or the emotional stress that leads to smoking is the causal factor.

► CORONARY heart disease is now blamed on smoking.

Already under fire as guilty in causing cancer, another strike is being called against tobacco.

Changes in the lung tissues of 240 deceased males, from samples taken in a survey of lung cancer in relation to smoking, the American College of Chest Physicians was told, showed a high incidence of coronary heart disease among heavy smokers.

Not so—Inability to give up smoking correlates with heart disease, a report to the American Medical Association indicates.

This is the finding from a survey of the smoking habits of 2,074 physicians, dentists and lawyers by Dr. Henry I. Russek of the U. S. Public Health Service Hospital, Staten Island, N. Y. Reaction to the emotional stress of a person's job is a key factor in coronary heart disease, he found.

Those who can give up smoking are more able to take life's stresses than those who continue to smoke or who have never smoked. The smoking habit is a "barometer" for judging a person's response to difficulties in life, Dr. Russek told the American Medical Association meeting at Chicago.

He found that those who had stopped smoking before their heart attacks, or before the time he made the survey if there were no attacks, showed "significantly lower" rates of coronary disease than persons who had never smoked.

Dr. Russek's findings are based on the assumption that the lives of general practitioners are more stressful than those of physicians, dentists or lawyers who have specialized within their fields.

The question of whether smoking causes coronary heart disease or not affects the nearly 30 million U. S. males who puff away each day. It may also affect women, but how much is still to be determined.

Four scientists who found significant changes in the lung tissues of deceased male smokers reported that inhaling cigarette smoke during a long period of time increases the heart's work load and reduces the supply of oxygen available to the heart muscle. At the same time, nicotine in tobacco causes a temporary increase in the heart beat rate.

A perfectly normal heart can probably withstand these effects of inhaling tobacco smoke. However, such effects can cause heart failure in a person whose arteries are partially blocked by hardening.

This finding is sufficient to account for the fact that the death rate from coronary heart disease is higher in cigarette smokers than in non-smokers, increases with amount of cigarette smoking, and is lower in ex-

cigarette smokers than in men who continue to smoke cigarettes.

These are the conclusions of Drs. E. Cuyler Hammond of the American Cancer Society, Oscar Auerbach of the Veterans Administration Hospital, East Orange, N. J., and A. P. Stout of the College of Physicians and Surgeons of Columbia University, New York, with Lawrence Garfinkel.

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Neutrons Kill Cancer

► BEAMING the electrically neutral particles of atomic cores at certain kinds of cancer kills the deadly cells in a treatment that last only three minutes.

Dr. Lee E. Farr, medical director of the Brookhaven National Laboratory, Upton, N. Y., told the American Medical Association meeting in Chicago that the results of experimentally treating cancer this way were "gratifying."

The work has been with so-called solid tumors—cancer of the bowel, cancer of the blood vessels, four types of brain cancer, bone cancer in dogs and transplantable cancers in mice. The procedure "virtually causes the cancer cells to commit suicide." Neutrons from the nuclear "pile" react with metallic boron, the element found in borax, or sodium borate.

Especially purified boron is converted into

sodium borate, then dissolved in water and injected into the blood stream about one-half hour before the neutron "bath" is given to the cancerous area.

All seven types of spontaneous cancers thus far tested, six in man and one in a dog, can be killed permanently to a depth of two and a half inches below the skin surface. The cancer disappears within two to four weeks.

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Shoulder Harness Urged

► TO PREVENT hideous facial scars from auto accidents, use a shoulder harness. It gives much more protection than the seat belts now being legislated into use in the United States.

Dr. John M. Converse of New York, a facial surgeon, told the American Medical Association in Chicago that parents who let their children ride in the suicidal right front seat without seat belts are "crazy."

Even with improved shatterless glass, a passenger's face can be completely smashed against the front window.

As many as a dozen operations cannot restore presentable features after such an accident.

Dr. Converse showed before and after photographs of surgery he had performed on accident victims, with special reference to eye injuries.

In 1960, 38,200 persons were killed in auto accidents; 1,400,000 spent more than one day in the hospital as a result of an auto accident.

Accidents are the leading cause of death in the age range between one and 24 years, of which 42% are motor accidents. Of these, 72% injure eyes and facial nerves.

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LARGEST FRESH WATER FISH—The model of the Pirarucu, the largest fresh water fish in the world, was prepared by Joseph O'Leary of the staff of Harvard's Museum of Comparative Zoology where it is displayed. This fish which grows up to 200 pounds is eaten by the Indians living in the basin of the Amazon and Orinoco Rivers.