

## MEDICINE

# Heart Disease Today in the U. S.

Someone dies of heart disease almost every two minutes in the United States. A study revealed that Americans are overweight, but persons who lose weight may live longer.

By HELEN BUECHL

AS IF AMERICANS did not have enough to worry about, they learned recently that they are, on the average, overweight.

This might not be so bad except that statistics show the fatter you are, the more likely you are to die early in life. This same comparison can be made with high blood pressure—the higher it goes, the earlier you go. If you are a male, especially over 30 years of age, you are more susceptible!

Coronary heart disease has become the leading cause of death in men 30 years of age and older in the U.S. This disease is highest in the Western world, and highest in the U.S. Two people die from it every minute in the U.S.

By 1955 coronary heart disease was highest in New York State. And it was ten percent higher in New York City than the rest of the state.

Studies in various countries throughout the world indicate that there is a relationship, mysterious though it may be, between the amount of fat consumed by each person in a country and the incidence of death due to coronary heart disease in that country.

The relationship remains a mystery because medical scientists believe that the amount of cholesterol in the blood stream causes much of the coronary heart disease, but they do not know just how.

## Clots Cause Heart Attacks

Coronary heart disease, or "heart attack," usually occurs when a blood clot forms in a heart artery hardened and narrowed by the accumulation of fatty substances. These substances are lipids in the blood stream. Cholesterol appears to be the biggest troublemaker among these lipids.

Medical researchers know that there is a relationship between high blood-cholesterol levels and occurrence of heart attacks.

They have found that middle-aged men with high cholesterol levels get heart attacks three to six times as often as men with normal levels of the fatty substance.

The cholesterol level in normal persons is between 150 and 250 milligrams per milliliter of serum. Anything above this level is undesirable.

In order to determine just what could be done to control skyrocketing and dangerously high cholesterol levels, especially among the most likely candidates for a coronary, the Department of Health of New York City a few years ago formed "The Anti-Coronary Club."

There are 600 members of this all-male club, each between the ages of 20 and 59. Approximately 60% of the members are in

the highly susceptible 50 to 59 year age group, 20% are in the 40 to 49 year age group and the remaining 20% are in the 20 to 39 year age group.

Each member of the club has accepted the responsibility of following a specific diet pattern for a period of years to establish whether or not a controlled diet will lower cholesterol levels and increase expected longevity.

The diet consists of foods high in protein content such as cottage cheese, chicken, turkey, veal, egg whites and fish. "Fatty" foods, such as pork, are eaten with the visible fat removed.

Members who are overweight are placed on special weight reducing diets.

One member, whose weight was 168 pounds at the start of the study and diet, had a dangerously high cholesterol level of 350. Six months of prudent dieting in the "club" brought this level down to 288, while he lost only two pounds.

The first recorded suspicion that cholesterol is the villain in heart disease was in 1913, by a team of Russian investigators. However, there is as yet no conclusive proof that cholesterol is responsible. Many medical researchers do suspect that high cholesterol levels in the blood stream are responsible for the fatty deposits that clog the arteries and cause them to be shut off.

For some reason that can only be guessed at, women before the menopause have lower blood cholesterol levels than men; after the menopause the rates are about the same for both sexes. Some experts believe hormones work in women's favor, keeping the level down. Injections of female hormones in males to lower cholesterol levels have not proved successful, however.

Very few women in the age groups before the menopause die of atherosclerosis. Now, the Society of Actuaries report reveals that women weigh distinctly less than a generation ago. This might also influence the lower incidence of heart disease among women.

At any rate, latest statistics show that the luckiest person is he who has below average blood pressure. Both men and



**NO MORE WHIPPED CREAM**—Expressing concern over the weight registered on the scale, this American knows that by reducing he can help himself avoid heart diseases such as atherosclerosis and high blood pressure. Statistics reveal that the American male is growing heavier to the detriment of his health.

women in this group have the lowest mortality rates. High blood pressure means trouble.

Some physicians believe that stress causes high blood pressure. This in turn damages the heart. The types of stress related to that of masses of people moving upward economically with most persons feeling a duty to elevate themselves and their children to a higher economic and social group, the stress of failing to escape from the boom, chatter and jangle of television, radio and the telephone, all may represent a newer type of strain to which mankind is making but poor adjustment, one researcher pointed out.

### The Heart Disease "Type"

Is there such a thing as a heart disease "type" of personality? Can scientists determine who is most prone to heart disease? A study by the Massachusetts General Hospital of coronary patients under 40 years of age revealed this composite portrait of the heart disease candidate:

He is a husky, robust male. His chest, trunk, face and hands are noticeably thick for their length, and he has a lot of hair on his body if not on his head. He was a good athlete in school and, although he is too busy for regular exercise now, he is apt to indulge in strenuous workouts whenever he gets a chance.

He is objective, realistic, matter-of-fact, conscientious, and sympathetic enough for women to call him "sweet."

But underneath, he is always in a hurry. He walks like a man who knows where he's going and is eager to get there. He seldom takes a vacation, works rather than plays at his hobbies, saves time by talking business at lunch. He looks as if he is in control of himself and the situation, but his wife may report that he falls into violent fits of temper if he is delayed or crossed.

He drinks and smokes more than most men. The odds are that he is a rising professional man or business executive who provides well for his family and could pose for a picture of the model father.

He looks and acts ten years older than his age. He may be prematurely gray, wrinkled or bald. He gives the impression that he has worked himself old before his time. Sound like someone you know? Tell him to slow down.

Science News Letter, February 20, 1960

### DERMATOLOGY

## Skin Eruptions Affected By Many Factors

A CHANGE of scene or workmen's compensation may be more potent in curing a skin eruption than the best treatment the dermatologist can offer.

The case histories of some 3,000 industrial workers point to at least 30 reasons why a patient's skin may not clear up after the original cause is removed, Dr. George E. Morris of Tuft Medical School reported.

He told scientists attending an America Academy of Dermatology and Syphilology meeting in Chicago that workmen's com-

penetration seems to slow the recovery of some patients. They find they can receive almost as much money by not working as they did while working. Another patient had suffered a disabling dermatitis for two years which cleared quickly when he learned that only healthy workers would be transferred to another location.

Other reasons given by Dr. Morris concerning why a patient may fail to respond to treatment: 1. serious nervous upset; 2. sensitivity to chemicals, particularly to one structurally related to the chemical that caused the original eruption; 3. vitamin deficiencies; and 4. excessive heat or cold.

Overtreatment and the use of certain antibiotics can also influence the patients response, Dr. Morris said.

Science News Letter, February 20, 1960

### MEDICINE

## Blood Vessels Dilate After Heart Attack

THE SHOCK that follows an acute heart attack may be due to a disturbance in the blood vessels, preliminary observations with a new procedure indicate.

The vessels may actually dilate rather than constrict, three investigators reported. It was once believed that development of shock was related entirely to the severity of heart damage.

The new procedure consists of a mobile unit, wheeled to a patient's bedside shortly after an attack, Drs. Maxwell J. Binder, L. E. Scaduto and Morton L. Pearce of the University of California Medical Center and the Veterans Administration Center of Los Angeles, Calif., said. A green dye technique measures the heart's output and blood pressure measurements are taken. So far, 22 patients have been studied with the device 24 to 48 hours after their attack. Surviving patients are restudied when they are fully ambulant.

Science News Letter, February 20, 1960

### ELECTRONICS

## Tiny Thermistor Will Pass Through Needle Eye

### See Front Cover

THE MIDGET BEAD thermistor, seen on the cover of this week's SCIENCE NEWS LETTER, is employed in electronics equipment for measuring temperature on the inside and outside surfaces of the Polaris and Atlas missiles. It is so small that it easily passes through the eye of an ordinary needle.

The bead thermistor is .010 inch in diameter and is mounted on a wire .001 inch thick. One pound of these instruments, manufactured by Gulon Industries, Inc., of Metuchen, N. J., would have a value of \$1,000,000.

The thermistors can be used in medical applications inside a hypodermic needle to measure blood temperature. They are also used in radio frequency power measurements in the microwave field and in the measurement of low gas pressures. They can measure temperatures between minus 76 degrees and 572 degrees Fahrenheit.

Science News Letter, February 20, 1960

### ALCOHOL BURNER

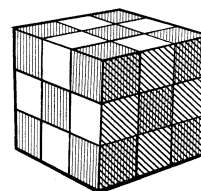
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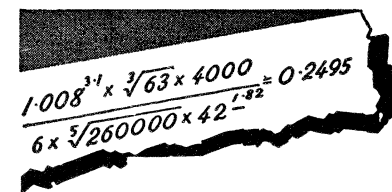


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