MEDICINE

# Heart Disease Likely Fate Of Young Men in Big Cities

WARNING to young professional and business men who live in large cities, work hard, exercise little, eat too much and smoke too much appeared in the report of Drs. R. Earle Glendy, Samuel A. Levine and Paul D. White of Boston at the meeting of the American Medical Association.

Heart disease before they are 60 years old is the likely fate of such young men.

More than one out of every hundred cases of coronary heart disease—1.6 per cent.—occurs in patients under 40 years of age, these physicians found. Young men are much more frequent victims than young women in the ratio of 24 to 1.

#### British Stock is Tough

Hoping to learn why so many young men are falling victims to what has generally been considered a disease of old age, the Boston physicians investigated the inheritance and living habits of a group of 100 young heart patients and compared these with similar information obtained from men and women of 80, 90 and 100 years of age.

Relatively far more of the older people were of British race stock, although the method of selection of this group for study and the time of immigration may have influenced this factor. Jewish people are more susceptible to heart and blood vessel disease, the study showed. The old men and women had longerlived ancestors than the young heart disease patients.

These factors are beyond the control of the individual, but living conditions and habits which he can control evidently also play an important part in causing development of heart diseases.

Country life, for instance, is not as hard on the heart as the stresses of city life. Nearly three-fourths of the men and women past eighty years old lived in the country or small town, while nearly nine-tenths of the young heart patients lived in large cities.

The older persons all claimed to have been moderate eaters and while, as the doctors pointed out they may have forgotten the hearty appetites of their youth their body build was generally lean as compared to the heavy build of the young heart patients.

Over nine-tenths of the older people exercised considerably till well past mid-

dle age. The young heart patients had many of them been strenuously athletic in their youth but only few continued to exercise regularly.

A striking difference between the two groups was found in their use of to-bacco, and this together with other evidence of the effect of tobacco, the Boston physicians believe, suggests that smoking plays an important part. A little over half the old group were smokers but only a few were heavy smokers. Over nine-tenths of the young group were smokers, more than half of them heavy smokers.

The two groups were more alike in their use of alcohol. A surprising finding was that severe infectious disease, generally supposed to impose considerable strain on the heart, had occurred, with the exception of diphtheria and pneumonia, more frequently in the older group than the young group. Even rheumatic fever and tonsilitis occurred less frequently in the younger group. The younger group, however, had more surgical operations than the older.

Irregular and few hours of sleep and nervous sensitiveness and nervous strain were other conditions found much more frequently in the young group which may have contributed to the early appearance of serious heart disease.

#### Silicosis Affects Heart

Heart disease occurred in nearly half of a group of war veterans suffering from silicosis, Dr. Philip B. Matz of the U. S. Veterans Bureau, Washington, D. C., reported. He said that silicosis, which occurs in persons working at dusty trades, is the greatest single occupational hazard in this country today.

The great seriousness of silicosis, Dr. Matz pointed out, is the fact that it is conducive to tuberculosis, which not only threatens the patient's life but makes him a hazard to his family and fellow workers.

Heart disease following silicosis results from the thickening of the fibers in the lungs which causes poor circulation of the blood and this in turn affects the heart.

### Bed Means Death

Elderly persons who get sick must be gotten out of bed and back on their

feet as rapidly as possible, in order to stall off death, Drs. Louis B. Laplace and J. T. Nicholson of Philadelphia told members of the American Medical Association.

Confinement to bed hastens death in persons over 60 years, they found. The reason is that remaining inactive and prone for long periods allows the blood to accumulate in the small veins and arteries. The total volume of blood is thus reduced and its circulation is further impeded by the hardening of the blood vessels that occurs in old age.

The blood therefore remains in the capillaries until it is forced out by contractions of the muscles, but a person confined to bed moves his muscles so little that the blood does not circulate enough. As a result, tissues degenerate, ulcers form, and the body is slowly poisoned by absorption of the products from the degenerated tissues. The patient sinks into stupor and the final invasion of the bacteria into the lungs causes the fatal pneumonia.

The way to prevent all this is to order elderly patients out of bed as soon as possible and while they must remain in bed to give them massage, exercise in bed, deep breathing and frequent shifts of position.

#### Vitamin Aids Gout

A vitamin discovery that sheds new light on gout and may prove a remedy for the ailment was reported by Dr. Martin G. Vorhaus of New York.

Cases of this disease were improved by doses of vitamin B<sub>1</sub>, Dr. Vorhaus has found. Pain and swelling disappear, and even more striking, X-ray pictures of the affected joints show that new bone tissue is apparently formed.

This is the first time that anyone has ever discovered any effect of vitamin B<sub>1</sub>, on bones, Dr. Vorhaus pointed out. Hitherto this vitamin was known only to affect nerves and the utilization of sugar. The discovery of its effect on bones is so new that Dr. Vorhaus and his associates have not yet decided exactly what is the relation between the vitamin and bones. They are reporting sixteen cases observed for longer than three months in order to stimulate other scientists to investigate the problem.

The discovery was made accidentally in treating neuritis with this vitamin, which is sometimes called the anti-beriberi vitamin because lack of it causes the oriental nervous disease known as beriberi. Some of the neuritis patients, instead of being helped by the vitamin as others had been, experienced severe

reactions and were for a time much worse.

The uric acid content of their blood rose, and this discovery led Dr. Vorhaus to continue the vitamin treatment in order to learn why the vitamin produced this effect. It turned out that all the patients had gout along with their neuritis, though the gout had not been suspected until its symptoms became acute after the vitamin dosage.

With more vitamin dosage, the patients improved greatly, and the uric acid content of the blood dropped back to normal. Not only gout of the big toe, but similar symptoms in other joints such as hands, feet, the spine, and the sacro-iliac were improved by the vitamin treatment.

Three-fourths of all persons suffering from early chronic arthritis—rheumatism to you—have symptoms in the feet, Dr. John G. Kuhns of Boston reported. The only way to prevent disability of these feet, Dr. Kuhns said, is to avoid putting weight on them until the pain and swelling caused by the disease subside. A plaster cast to hold the foot in a normal position at first, and then exercises to strengthen muscles and wide shoes with low, broad heels and firm thick soles were advised.

#### Arthritis Fads Denounced

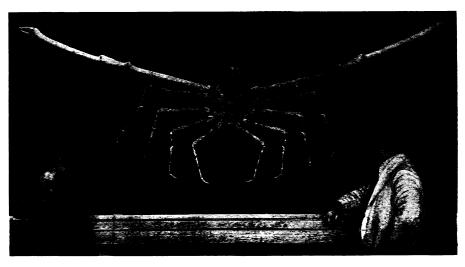
A denunciation of vaccines, sera, weird diets and all manner of gland therapy in treating hypertrophic arthritis was made by Dr. Walter Bauer of Massachusetts General Hospital and Harvard Medical School to the American College of Physicians.

No justification for such treatment exists, Dr. Bauer concludes from studies made by himself and Dr. Granville A. Bennett, because there is no evidence that the condition is caused by infection, gland disorders or disturbed chemistry.

The patients "should be told the exact nature of their disease and assured that they will not become cripples. Their treatment," Dr. Bauer stated, "should consist of all measures which will protect the joints from further damage."

Calling this condition arthritis is just as wrong as calling it rheumatism, it appears from Dr. Bauer's report. The condition is not, as the name would imply, an inflammation due to infection.

"Degenerative joint disease" is the name Dr. Bauer said describes the condition correctly. His studies show that the joint changes are degenerative and that they are found in practically all people past 50 years of age. They do not always produce symptoms.



ELEVEN-FOOT SPREAD

Regular gorilla among crabs is this giant crustacean from Japan, now on display at the Buffalo Museum of Science. Its claws have an eleven-foot reach, and its body is bigger than a man's head.

These changes represent nothing more than the wear and tear of daily use over the years and the minor injuries subsequent to such use. They can be produced in this manner in animals and they are found in persons whose occupation has called for unusual use of one joint and not of its mate. In such a case the long-used joint will show marked hypertrophic arthritis, whereas the mate will appear normal or show very little change.

Explaining how these changes come about, Dr. Bauer said:

"Experimental studies have shown that the gristle or articular cartilage covering the ends of all bones is different from other body tissues. It has a very poor blood supply and, in consequence, a very limited source of nourishment. Because of these existing deficiencies, articular cartilage differs from other body tissues in that it has a very limited ability to repair itself once it is incised or injured. Other body tissues when injured repair themselves completely in a very short period of time, whereas, in the case of articular cartilage, the marks of previous injury may be discernible for years.

"Because of this limited ability to repair itself, articular cartilage is unable to repair the minor injuries and traumata resulting from the wear and tear of daily use. Such minor injuries are additive and over a period of years result in marked thinning or complete loss of the cartilage and a protective overgrowth at the margins. Such changes are the characteristic changes of so-called hypertrophic arthritis."

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MARINE BIOLOGY

## Giant Crab on Display At Buffalo Museum

BIGGEST of all its crustacean kin is the giant crab of Japan, a specimen of which has just been placed on display at the Buffalo Museum of Science. With its eight spine-hooked legs and the eleven-foot reach of its claws, it is an awesome sight.

Actually, about the only persons who ever get to see these huge crabs alive are the Japanese fishermen, who value them for both meat and carapace or shell. The shells they paint with fantastic faces and hang them up on their houses to frighten away evil spirits.

For all its formidable appearance, the giant crab is both retiring and inoffensive. It lives in deep water (the Buffalo Museum specimen was caught half a mile below surface) and it seeks further concealment by planting bits of living sponge, coral, and other sessile animal forms on its back. Despite this camouflage, however, it is found and devoured by predacious fish and octopuses.

Science News Letter, July 3, 1937

# SEASICKNESS

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