

MEDICINE

Causes of Hypertension

➤ **OVEREATING**, gaining too much weight, then going on a reducing diet, tiring of that and overeating again may be one cause of high blood pressure with resultant heart disease and death.

Dogs on a regime that mimicked this eating cycle of the "average American citizen" ended up with a high blood pressure that stayed high even 22 months after they were back on a normal kennel diet, five scientists from Creighton University School of Medicine, Omaha, Neb., reported at the American Physiological Society meeting in Rochester, N. Y.

Twenty-two months of dog life is equivalent to almost 14 years of human life.

The five scientists reporting the studies were Dr. C. M. Wilhelmj, Darinka Shuput-Meyers, A. J. Carnazzo, Dr. C. M. Wilhelmj Jr. and Dr. H. H. McCarthy.

The studies were not designed primarily to mimic the dietary indiscretions of the American public, the scientists said. Looking back on them, however, the scientists saw that the eating cycle does closely resemble many human ones.

Trained dogs whose normal blood pressures were known were first put on long fast, and then on diets containing 50% or more of the calories from butter or beef suet. These "fat episodes" were repeated six times in 14 months.

The first abnormal response was a tendency for the blood pressure to rise during long fasts instead of falling as it does in normal dogs. The animals were then placed on high calorie diets of carbohydrate, meat and fat and became very fat.

During this period the blood pressure was much higher than it had been on the same diet before the "fat episodes."

The dogs then were put on reducing diets and lost weight, but the blood pressure began to rise instead of falling as it would in normal dogs. The blood pressure continued to rise to truly hypertensive levels and soon became fixed at the high level and independent of the diet.

"The condition now resembles human benign essential hypertension and is still present on the normal kennel diet 22 months after the end of the last 'fat episode,'" the scientists reported.

"Diets high in protein or carbohydrate have previously been studied in a similar manner, but only the animal fat diets caused an elevated blood pressure after the experimental food material was discontinued.

"These experiments suggest that diets high in animal fat plus obesity and irregular use of reducing diets may be one cause of essential hypertension."

Science News Letter, September 29, 1956

GENERAL SCIENCE

Science Talent Institute Begins on March 7, 1957

➤ **THE SCIENCE TALENT INSTITUTE** climaxing the Sixteenth Annual Science Talent Search for the Westinghouse Science Scholarships will be held on March 7 through 11 at the Hotel Statler in Washington, Watson Davis, director of SCIENCE SERVICE, has announced.

Each year, more than 20,000 high school seniors throughout the United States take part in the Search. After passing a series of eliminating hurdles, 40 of the nation's best potential research scientists are selected from among the thousands who vie for the coveted honors each year.

The five-day Science Talent Institute brings together these future scientists and enables them to meet and talk with some of the nation's leading scientists, as well as visit the many laboratories and scientific centers in and around the nation's capital. At the end of the sessions, the scholarships are awarded.

In addition to the 40 top winners, 260 young scientists are selected for honorable mention and recommended to universities for scholarships.

At a time when the country is suffering from an acute attack of scientist shortage, the Search is beginning its sixteenth year of discovering scientific talent.

Colleges, universities and technical schools have found the Science Talent Search a valuable aid in spotting above-average science students. From the first Search in 1942, they have used it as a way of giving scholarships and other financial aid.

Science News Letter, September 29, 1956

RAPID CALCULATIONS

by A. H. Russell

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Questions

CHEMISTRY—What groups of chemicals spare the crop but kill weeds? p. 200.
How can water poisoned by radiation be made safe to drink? p. 205.

GENERAL SCIENCE—When is Science Youth Month? p. 198.
What is the extent of Federal aid to college students? p. 201.

MEDICINE—How can the heart's output now be charted? p. 205.

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How can atomic radiation be converted directly into chemical energy? p. 200.

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