

## PHYSIOLOGY

# Dead Hearts Brought to Life Aid Study of Drug Effects

## Action of Various Common Heart Medicines Tested On Organs In Differing Conditions of Muscle Tone

**H**EARTS from dead men, revived for scientific experiment, are giving new knowledge of how to use the drugs that aid heart afflictions. Experiments wherein fresh blood was pumped through dead hearts until they started beating freely again have just been reported by Dr. William B. Kountz of Washington University School of Medicine at St. Louis.

The drugs commonly used to treat disease may be helpful or harmful, depending on the state of the heart, Dr. Kountz found.

In the type of heart disease Dr. Kountz investigated and reported to the Southern Medical Association, the small arteries of the heart muscle itself are closed. Blood therefore cannot get through to nourish the muscle and keep the heart at work pumping blood into the rest of the body.

Physicians have lately been treating this heart ailment by giving drugs that would dilate the closed or dangerously narrowed arteries, on the theory that widening the arteries would help to keep the blood flowing through them. They learned which drugs to use by studying the drug's action on the heart arteries of experimental animals.

The use of the artery-expanding drugs in human cases of heart disease has, however, not been entirely satisfactory, Dr. Kountz observed. His research seems to show why. In human hearts, he found, the state of the heart or the tone of the heart muscle is the chief factor influencing the flow of blood through the heart's arteries.

Dr. Kountz tried the effect of various common heart medicines, such as nitrites, liver extract, theobromin, digifolin and adrenalin, on the hearts he had revived. Their action on the heart was entirely different when the heart muscle was contracted from when it was relaxed. Nitrites, for example, which ordinarily increase the flow of blood through the heart's arteries, increased it still more when the heart muscle was contracted, but lost their effect entirely when the heart muscle was relaxed.

Physicians will know better what

drugs to use in treating heart disease if they classify heart ailments according to the state of the heart as far as it can be determined by studies of the patients, Dr. Kountz advised in conclusion.

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## ARCHAEOLOGY

## Club Life in 159 A. D. Revealed by Expedition

**A** GLIMPSE into club life of 159 A. D. is the latest revelation from ruins of Dura on the Euphrates, announced by Yale University.

The joint expedition of Yale and the French Academy of Inscriptions has dis-

covered in the ruined city a merchants' club house, richly decorated with bas-reliefs.

The club house was used by caravan merchants of three cities—Dura, Palmyra, and Anath—and also by mounted archers who served as desert guards for the caravans. Combining religion with relaxation, the club was also a temple to the "Fortunes" of the sister caravan cities.

Sculptured decorations in the building show the deities that served each city as "Lady Luck."

Excavation of the famous synagogue at Dura, built in 245 A. D. has been completed, with additional discoveries of paintings showing early Jewish ideas of Old Testament scenes. Queen Esther and King Ahasuerus seated on the throne of Solomon are portrayed in one of these extremely early paintings of Bible stories.

Dura's cemetery is also being explored with good results, says the report. Robbers, ancient and modern, had rifled most of the graves, but several untouched burials have yielded coins, pottery, glass, and other objects used in the ancient city.

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LADY LUCK IN 159 A.D.

*This lady, Atargatis by name, guarded the good fortune of the great caravan city Palmyra. Merchants, in particular, paid homage to lady luck, and this bas relief is discovered in ruins of a merchants' club house, at Dura-on-the-Euphrates. Each of the three cities that sponsored the club had its own patron deity carved in the decorations. Palmyra's lady is shown crowned by victory, while the donor of the art piece looks approvingly on.*