MEDICINE

Vasopressors Save Heart By Conserving Blood

➤ THE LIFE-SAVING vasopressor drugs, used to combat shock after a heart attack, conserve the blood supply to heart and brain at the expense of other less sensitive organs in the body.

This has been demonstrated in research by Drs. Eliot Corday, John Williams, Lauro de Vera and Herbert Gold of the University of California at Los Angeles Medical School.

The group reported on their research to the American College of Chest Physicians meeting in San Francisco.

Blood flow to the heart, brain, kidneys and liver during shock and following administration of vasopressor drugs was studied. It was found that with restoration of blood pressure following drug administration, heart blood flow increased 500%. Blood flow to the brain increased in a similar manner.

Sudden restoration of blood pressure reduced kidney blood flow to even lower levels than those during shock. This may account for kidney damage occasionally found in patients treated with vasopressor drugs, the doctors said. However, with a gradual restoration of blood pressure kidney flow improved somewhat.

The liver has a double blood supply, the investigators pointed out, 1. an arterial one rich in oxygen and 2. a venous one with reduced oxygen. During shock, blood flow to the liver is so low that damage is sure to occur. When blood pressure is restored only one of the systems, the arterial one, functions. However, the rich oxygen supply compensates for decreased blood flow.

The role of the drugs seems to be to conserve heart and brain blood supply during severe stress when the heart can only pump sufficiently to supply nourishment to these two vital organs. The heart and brain can withstand oxygen starvation for only a few minutes. The liver and kidney can go much longer without oxygen.

Science News Letter, July 12, 1958

GEOPHYSICS

Sputnik I's Rocket Pieces Are in Russia's Backyard

➤ THE PIECES of sputnik I's rocket are somewhere in Russia's backyard, Drs. R. Jastrow and I. Harris of the U. S. Naval Research Laboratory report.

The report, appearing in *Science* (June 27), contradicts both official and unofficial Russian claims that sputnik I's rocket was strewn over Alaska and the western coast of Canada and the United States. It also refutes the statement made by Nikita Khrushchev in early December 1957 that the carrier rocket plunged to earth over American territory but "the Americans will not give it up to us."

New calculations of the rocket's last passage and its fall, made by Drs. Jastrow and Harris, indicate that it probably hit the earth in Outer Mongolia, although some of its fragments may have been scattered as far as China and even in the Soviet Union itself.

The Navy scientists estimate that the rocket, known officially as 1957 Alpha 1, fell on Dec. 1, 1957, at 8:46 a.m. Greenwich mean time, approximately eight hours after the last radar observation made on it in the United States.

The final observation was made from Malvern, England, at 8:28. At the time of that last observation, the rocket had an altitude of only 71 miles and was in its final dive. The NRL scientists believe that the rocket continued on past Malvern for 64 degrees in the plane of the orbit before it struck the earth.

After it passed over Malvern, the rocket probably disintegrated into fragments with differing drag coefficient and these fragments were doubtless strewn over a wide area.

Science News Letter, July 12, 1958

ICHTHYOLOGY

Government Scientists Study Oyster Problems

➤ STARFISH and oyster drills are giving the oyster fisherman stiff competition. These sea creatures go along with human beings in finding the oyster a tasty morsel. Unfortunately, they have a head start by being at the scene, at the oyster bed.

Right now research is being pushed to discover ways of controlling or eliminating oyster predators.

Scientists have already discovered oyster drills will not cross over copper-trimmed fences. The reason for this is unknown, but one such fence will be put around a half-acre plot in Chincoteague Bay off the Maryland-Virginia boundary this year to see how effective it is in protecting the oyster beds.

At the Bureau of Commercial Fisheries Laboratory at Milford, Conn., scientists are searching for a selective poison that will kill the oyster drill yet not injure the oysters or other valuable sea life.

While the drills are a year-round problem, much oyster research is directed at finding why in some years the starfish population soars to ten times the normal number.

At the same time scientists are investigating this biological question, they are working on ways to control starfish. Granulated unslaked lime has been successful in destroying them.

Other problems besides predators face the oyster industry, however.

Current studies include ways of ending the scarcity of seed oysters. Salt water ponds, fresh water is deadly poison to the oyster, on Martha's Vineyard, an island off Massachusetts, offer good sites for this study. The unexplained mortality in 1957 of some 40% to 95% of the oysters in beds along the New Jersey side of Delaware Bay is also being investigated.

The Federal Government, through the U. S. Fish and Wildlife Service's Bureau of Commercial Fisheries, is responsible for much of the current oyster research.

Science News Letter, July 12, 1958

PUBLIC SAFETY

Information Program On Nuclear Accidents

➤ STATE AND local government officials across the country are being briefed by Atomic Energy Commission experts on how to handle radiation incidents in their areas.

Although highly unlikely, it is possible an accident involving a nuclear reactor or radioactive materials could release hazardous amounts of radioactivity. If such a radiation incident occurs, local officials may seek advice and assistance from the nearest AEC office or the nearest military installation.

Science News Letter, July 12, 1958

SCIENCE NEWS LETTER

VOL. 74 JULY 12, 1958 NO. 2

Cable Address: SCIENSERVC

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington 6, D. C., NOrth 7-2255. Edited by WATSON DAVIS.

Subscription rates: 1 yr., $5.50; 2 yrs., $10.00; 3 yrs., $14.50; ten or more copies in one package to one address, 7½ cents per copy per week; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

Change of address: Three weeks notice is required. When ordering a change please state exactly how magazine is now addressed. Your new address should include postal zone number if you have one.

Printed in U.S.A. Entered as second class matter at the post office at Washington, D. C., under the act of March 3, 1897. Acceptance for mailing at the special rate of postage provided for by Sec. 34.40 P. L. and R., 1948 Edition, paragraph (d) (act of February 28, 1925; 39 U. S. Code 283) authorized February 28, 1950. Established in mimeograph form March 13, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Reader's Guide to Periodical Literature, Abridged Guide, and the Engineering Index. Member Audit Bureau of Circulation.

SCIENCE SERVICE

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