

MEDICINE

Test Blood Stickiness

A simple technique has been developed which will indicate to the doctor which patient is susceptible to having a blood plug form in the veins.

► YOUR doctor may drip your blood to see how quickly it gets sticky in a new, simple test devised to forestall complications that produce a blood plug in your veins. This possibility is the promise of a new technique revealed by Dr. John N. Shadid of Washington, D. C., to the Medical Society of the District of Columbia.

Doctors always fear that following a fractured hip, injury to a leg or an operation, a blood clot will form which may plug the lungs or brain and either incapacitate the patient or cause death. As a precaution against this, patients have been made to get out of bed shortly after surgery.

Dr. Shadid's test would be an invaluable adjunct to present procedures. It would tell doctors ahead of time by the stickiness of the patients' blood who would need treatment to check this dangerous development.

Here is how it's done: A small amount of blood is withdrawn into a syringe. The time it takes 15 drops of blood to drip from the needle is timed by a stop watch. A viscosity or stickiness index is worked out by dividing the time it takes distilled water to drip, into the time it takes blood to drip through. If the blood is in its normally fluid state it should take about 90 seconds.

The test was first given to 75 normal

people ranging in age from 18 to 89 years. The viscosity index in these subjects varied between 4 and 5.5. These figures were arrived at after at least three tests were made on each person.

Sixteen other patients who were known to have diseases in which there was a blocking of a blood vessel by a clot, showed extremes in test results. The stickiness of their blood ranged from over 7.5 to a state where the blood clotted before there were 15 drops. The test was repeated for several days until the blood viscosity suddenly or gradually dropped to normal. These patients had been receiving treatment mainly with heparin, a drug which prevents blood-clotting.

Ten patients with conditions that might produce a blood clot also received the test. Two of these patients showed by the viscosity index that they might develop a blood clot, while the others were within normal range.

In conclusion, Dr. Shadid stated that the test is useful in picking out those patients who might need anticoagulant treatment and in determining the type of treatment, particularly when to give and when to stop anticoagulant treatment.

He proposes to make further tests on patients and present a report in the future on the results.

Science News Letter, May 21, 1949

a curie should be discharged per liter (1.1 quarts) of water. And no scientific institution should let more than 200 thousandths of a curie of radioactive material get into a main sewer in a week.

This report on interim recommendations for disposal of the isotopes lists only iodine with an atomic weight of 131, phosphorus 32 and carbon 14. These three elements account for 90% of the activity of the radioactive isotopes which have been shipped to scientists thus far.

Science News Letter, May 21, 1949

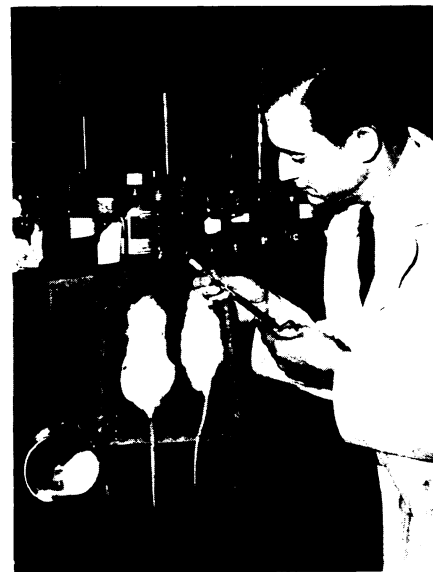
CHEMISTRY

Chemical Methods Can Preserve Works of Art

► HOW modern chemistry can preserve art treasures, restore them or even show up fakes was described by Prof. Colin G. Fink of Columbia University.

Dr. Fink, who is associated with the Metropolitan Museum of Art in New York, explained that chemical methods are used at the Metropolitan Museum to keep harmful dust from settling on art pieces and remove or neutralize destructive acid particles.

A method of restoring corroded ancient bronzes has been developed by the Columbia chemist and is now being used in museums throughout the world. This technique reverses the corrosion process



BROTHER RAT LACKS VITAMIN B—The rat on the right has been fed a diet lacking in Vitamin B-12 while the one on the left has had adequate amounts of it. The effect of the vitamin on growth is clearly shown in these experiments being made at the University of Wisconsin biochemistry department.

NUCLEAR PHYSICS

Packaging Atomic Wastes

► A CEMENT mixer may be a part of the atomic-age laboratory equipment of the scientist who uses the radioactive by-products of the atomic bomb.

The cement mixer would do the job of a garbage grinder or the kitchen sink. One method of getting rid of radioactive waste materials, explains an Atomic Energy Commission circular, is to make concrete.

Radioactive waste materials are put in the liquid used in making the concrete. The hardened concrete is then stored away, dumped in the ocean or buried on land. The method of disposing of the radioactive concrete which should be used depends on the material.

Laboratories can dump the radioactive materials down the drain but they are advised to follow some pretty technical rules in doing it.

Recommended ways of getting rid of radioactive wastes are listed in a Commis-

sion report for scientists using these forms of chemical elements, which are now available to them on a relatively large scale.

If you want to put any of these radioactive isotopes down the sink, you must make sure that the main sewer is getting plenty of water to dilute the chemical. And the plumbing should be checked regularly for radioactivity, especially before any repairs are made.

The quantity of radioactive material which can be safely discharged into a sewer is stated in terms of radioactivity rather than quantities of the element. The unit used is the curie. A curie, named for the famous French scientists who discovered radium, is the activity of a substance in which 37,000,000,000 atoms disintegrate each second.

In letting radioactive iodine go down the sink, only one-half of a millionth of