

tists, Dr. Condon said secrecy "should not be applied to scientific principles and basic research data.

"As long as we have armies and navies and air forces with their military equipment, it will be desirable to keep secret specific design features. Such a policy would not react unfavorably on international cooperation in science, and it won't hamper the work and the development of our own science," the director of the Bureau of Standards explained.

Dr. Shapley, who recently returned from lectures and conferences in India, said, "Science is an integral part of the culture and civilization of America.

"But our science must not be nationalistic. In these days of a shrinking planet, and an expanding brotherhood of men of all latitudes and longitudes, we must develop planet-wide concepts of the functions of science in society," the astronomer declared.

Urging young scientists to tackle "scientific problems on an international basis," Dr. Shapley suggested nutritional studies as an example.

Students of nutrition and allied problems "should think of the nutrition problems of the Tropics and the Arctics, as well as what goes best for us in the Temperate Zone."

Dr. Shapley reported that several hundred students from India are on the waiting list for one American technological school alone and that there are other countries whose students seek to enter our colleges and universities.

Explaining that he was started to learn of this situation, the scientist added, "And the situation disturbs me because I fear that we in the fields of education and science do not sufficiently realize our heavy responsibility in the advancement of civilization and our golden opportunity to serve the world."

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MEDICINE

Legs Saved From Gangrene

Vitamin-amino acid combination starts body reactions which halt gangrene. Treatment may be useful for other blood circulation-impaired diseases.

► FIVE VETERANS who faced amputations of feet or legs because of gangrene are on the road to recovery. Their blackened, shrivelled, mummified toes are getting soft and pink and ready for walking.

Another six are also recovering from the same excruciatingly painful blocking of blood circulation which caused gangrene in the first five.

A new treatment with a vitamin and an amino acid is responsible. It was devised by Drs. Zolton T. Wirtschafter and Rudolph Widmann at Wadsworth General Hospital, Veterans Administration Center, Los Angeles, as reported to the *Journal of the American Medical Association* (March 1).

Patients with disease of the heart's artery, with angina pectoris, high blood pressure, kidney disease, paralytic strokes and a half dozen serious ailments may be helped by this same new treatment.

The treatment itself consists of injections of synthetic vitamin C, or ascorbic acid, and of another chemical, histidine, which is one of the amino acids that are building blocks of protein.

Vitamin C converts histidine into another chemical, histamine. This was a

test-tube discovery made 10 years ago by a German chemist, P. Holtz. The VA doctors are apparently putting the same chemical reaction to work in the bodies

of the patients.

Histamine has a powerful dilating effect on small blood vessels. Contraction of small blood vessels by inflammation of the lining of the vessels or the presence of clots in the vessels can dangerously slow blood circulation. Gangrene is one result. Tissues deprived of blood die and decay. The affected part must be cut off to stop the spread of the gangrene, if possible. Before the gangrene, patients suffer horrible pain which frequently cannot be relieved by any drug.

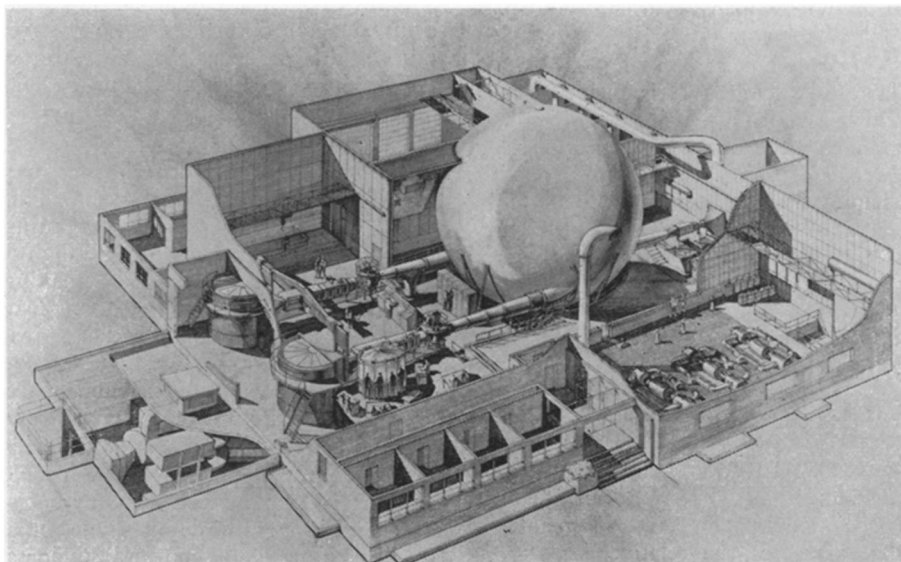
Getting the blood circulating again is the object of doctors treating the condition. In New Orleans Dr. R. A. Katz, after heroic experiments on himself, tried injecting ether into the patient's veins to increase circulation of the blood.

Drs. Wirtschafter and Widmann tried this ether treatment. They found it helped some patients but not all, and caused complications which made it necessary to discontinue the ether injections. Studies they made of the patients getting the ether treatment, however, suggested that it increased circulation by causing a release of histamine in the body.

This gave them the idea of trying the vitamin C-histidine reaction to produce histamine.

The results, with patients relieved of pain in a few hours and gangrene beginning to clear up in a day or two, make the method worthy of further investigation, they believe. They are going to try it for a number of serious diseases in which blood circulation is impaired.

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WIND TUNNELS—Original supersonic wind tunnels captured at Kochel, Germany, will be reinstalled in this special building of the new Naval Ordnance Laboratory, now under construction at White Oak, Md.