

PHYSIOLOGY

Fish Juice Safe Drink

Human guinea pigs live for ten-day period on daily ration of from 10 to 14 ounces of fish juice as the only liquid in their diet.

➤ BLOOD and other physiological analyses, as well as clinical observations, all indicate that fish juice, taken as a substitute for water or other liquids, will maintain human life for protracted periods. In a clinical test, two volunteers from the Navy remained in excellent condition for ten days on a diet of solids with no free liquids except the juices of saltwater fish.

The purpose of the test was to determine if shipwrecked men in lifeboats whose supply of water was exhausted, could maintain life on fish juices. It now seems evident that they can. At the end of the period these men were in as good condition as at the beginning as far as could be determined. The indications are they could have lived indefinitely.

The tests were made under the supervision of Dr. Homer W. Smith, of the New York University College of Medicine, at the request of the U. S. Navy Bureau of Medicine and Surgery.

Both men, during the ten-day period, ate freely the solid food given them, but were given nothing to drink except approximately 10 to 14 ounces of fish juice daily. After the first four days their solid diet was restricted to high-fat, low-protein foods.

Analyses of blood and excreted body fluids showed somewhat abnormal physiological conditions, but nothing which Dr. Smith considered dangerous to health. There was evidence that the salt content of the body decreased, reflecting the relatively small amount of salt taken in with the fish juice.

"Since the fish juice contains little chloride and few non-metabolizable osmotic ingredients," the doctor states, "and since under duress, it is sufficiently palatable to be ingested for a protracted period, and induces no nausea or vomiting. . . . I am inclined to believe that, under conditions of starvation or on a restricted diet, it would greatly aid in the maintenance of water equilibrium."

Lifeboats and life rafts are already being equipped with fishing tackle to enable their occupants to secure fishfood. Now it is proven they can secure both food and drink if they can get enough fish. To get the juice out of the fish all

that is necessary is for them to chew the raw flesh, swallowing the liquid and spitting out the solid matter. It is a slow process but it can be a life-saver.

Credit for the idea of saving lives by fish juices is due to Gifford Pinchot, for twelve years head of the U. S. Forest Service and twice governor of Pennsylvania. He had previously persuaded the Navy to equip lifeboats with fishing tackle. The thought came to him that fish juices might prevent deaths from the dreadful killing thirst of men without water. He tried the fish juice himself. He found the cloudy, faintly pinkish liquid, obtained by the use of a press, to be sweet and palatable and to have no particular fishy taste. He then took the matter up with the Navy authorities who became interested and arranged for the clinical tests conducted by Dr. Smith.

Science News Letter, August 14, 1943

MEDICINE

Larger Amounts of Plasma Advised for Burn Shock

➤ MUCH LARGER doses of blood serum or plasma than usually prescribed are needed to save the lives of patients with burn shock, Dr. D. L. Presman, Miss Martha Janota, Dr. R. E. Weston, Dr. S. O. Levinson and Dr. Heinrich Necheles, of the Samuel Deutsch Serum Center of Michael Reese Hospital, Chicago, declare. (*Journal, American Medical Association, July 31*).

At least 100 to 110 cubic centimeters (almost four ounces) for every per cent of body surface burned should be given

during the first 72 hours, they advise. About half of this should be given immediately and rapidly, using a large needle or two needles in two veins. Such treatment, they believe on the basis of their studies of burn blister fluid as well as the patients' condition, would prevent depletion of the body's proteins and "might protect vital organs like the liver and kidneys."

In two cases of patients with 45 to 50% of the body surface burned, they injected into the veins of each patient about one and one-half quarts of normal serum within the first four hours and during the next 64 hours about two and one-half more quarts of serum plus about six quarts of salt and sugar solution. Without these massive doses, to replace fluid and proteins lost from the body as a result of the burns, it is believed that both patients would have died.

Science News Letter, August 14, 1943

Georgia *hard clays* may be used satisfactorily after undergoing a practical treatment developed by the Bureau of Mines, as a substitute for Georgia soft clays widely used in paper, ceramics and rubber industries.

Let us do it

When you want a book on science, save yourself the trouble of shopping. Let us get it for you. We will gladly obtain any American book or magazine in print and pay postage in the United States. Just send your check or money order to cover retail price (\$5 if price is unknown, change to be returned to you). When publications are free, send 10c for handling. Address:

Book Department

SCIENCE NEWS LETTER
1719 N St., N. W. Washington 6, D. C.

SCIENCE NEWS

LETTER SUBSCRIPTION COUPON

To Science News Letter, 1719 N St., N. W. Washington 6, D. C.

Start my subscription to SCIENCE NEWS LETTER for 1 year, \$5
 Renew 2 years, \$7

Name _____
Street Address _____
City and State _____

(No extra postage to anywhere in the world)

