

PHYSIOLOGY

# Headaches Caused by Stretch Of Brain's Blood Vessels

**Either High or Low "Tide" of Brain Fluid May Cause Pain; Regulation of Fluid Intake Is Advised**

"TIDES" in the brain make a headache—the "morning after" kind or otherwise, Dr. Temple Fay, professor of neurology at Temple University Medical School, Philadelphia, told members of the American Neurological Association meeting in Atlantic City.

Headaches, it appears, may be classed relatively as wet ones (high tide) and dry ones (low tide). The headache of the "morning after" is a wet one, though not all wet ones are due to alcoholic indulgence. General over-indulgence in food and fluids brings on this kind.

What makes a headache, reduced to simplest terms, is the amount of fluid in and around the brain. Too much or too little of this fluid results in stretching the large blood vessels that supply the brain. The stretching is what hurts. Dr. Fay determined this by stretching the nerves of these blood vessels in the brains of patients undergoing brain operations.

The wet headache—too much fluid in the brain—is most common in the overweight, hydrated person who consumes large quantities of food and fluid and does not eliminate enough fluid. This person should, in general, reduce the amount of liquid consumed to not more than one quart a day.

## Some Should Drink More

The headache noted in the common type of underweight, overactive, nervous individual arises when fluid from the body is too rapidly lost from the skin or kidneys and cannot be properly retained in the brain cavity. This type of person, with the advice of his physician, should increase his fluid consumption to three or more quarts per day along with extra feedings.

These directions, Dr. Fay pointed out, apply to the true variety of headache, and should not be followed until medical examination has ruled out other conditions which may refer pain to the head.

The beneficial use of certain drugs for headaches was ascribed to their effect in regulating the fluid and blood volume

relationship within the brain itself.

The large blood vessels which give a headache when stretched are the only structures in the brain that carry pain fibers. Besides stretching because of too much or too little fluid, irritation of these vessels at other places on their path to and from the brain gives rise to pain felt in the head as a headache. Such irritation may arise in the neck, chest or abdomen, and this explains the headaches that may accompany infections in nose, throat or in diseases of the chest and abdomen.

The discovery of the mechanism of headache reported is based on many years of research by himself and other scientists, Dr. Fay pointed out. He also

reported a test, called a cephalogram, for determining whether a headache is of the wet or dry variety.

*Science News Letter, June 13, 1936*

PUBLIC HEALTH

## Water Pollution Problem Made Acute By Recovery

RIVERS and streams of America are being polluted by a third of the nation's population and by reviving industries, despite a quarter century of struggle by health and conservation experts to keep water supplies clean and safe.

This warning was carried to President Roosevelt from a conference of governors, senators and technical authorities held in Washington, D. C. Abel Wolman, Maryland Health Department chief engineer and water resources specialist, revealed the present extent of the threat to clean, drinkable water.

Dr. Thomas Parran, U. S. Public Health Service Surgeon General, listed as regions of acute pollution: Ohio River, the Niagara frontier, the Hudson



### MEASURING SUNLIGHT'S INTENSITY

*One of four devices of its kind is the new sunlight intensity photoelectric recorder now in use at Massachusetts State College. It is being used in experiments on plant physiology where not only the hours of sunlight but their relative intensity must be known. Miss Della Brownell, assistant to the head of the College weather station, is demonstrating the apparatus to a student.*