

## MEDICINE

# Remedy for Leg Cramps

**Painful leg cramps of expectant mothers are due to milk and calcium phosphate. Some reduction of milk and taking aluminum hydroxide advised.**

► THE PAINFUL leg cramps that afflict expectant mothers, usually just as they awaken and stretch in the morning, were blamed on milk and calcium phosphate in a report by Dr. Ernest W. Page of the University of California Hospital, San Francisco, to the American Medical Society meeting in Chicago.

As a remedy, Dr. Page advises a "moderate reduction of milk" and taking aluminum hydroxide with each meal.

This reverses advice usually given to pregnant women. For many years doctors have known that during the latter part of pregnancy, about three-fourths of the expectant mothers have a heightened irritability of the nerve and muscle systems.

It has been commonly believed that calcium has something to do with this. And many obstetricians recommend an increase of calcium and vitamin D to relieve the leg cramps. Usually they advise their patients to drink more milk and prescribe tablets, or pills, of dicalcium phosphate.

Experience with patients during a 10-year period convinced Dr. Page that the extra milk and large amounts of dicalcium phosphate actually induced leg cramps. Cramps were reduced when calcium was given in the form of calcium lactate or gluconate.

Poor women, Dr. Page also found, suffer less from leg cramps than women in higher economic classes. Only 14 out of 100 women who came consecutively to the clinic while pregnant reported leg cramps, compared to 56 out of 100 private patients. The private patients ate about twice as much milk, eggs and meat as the clinic patients.

These foods are rich in phosphorus and Dr. Page believes the phosphorus is actually the trouble maker. Calcium and milk come into the situation because there is a reciprocal relation between the calcium and the phosphorus in the blood. Giving large amounts of phosphates by mouth, for example, can actually cause tetany in dogs because the phosphorus depresses the calcium in the blood.

Drinking a quart of sweet milk may cause an actual fall in the amount of calcium in the blood and a rise in phosphates within eight hours. This is not true of milk acidified with lactic acid. The buffering action of ordinary milk apparently makes the calcium less available for absorption through the intestines.

Further evidence for the theory that calcium and phosphorus are involved in leg cramps came from blood tests on women who had such cramps. When the patients

stopped drinking milk and took Creamalin, a medicine containing aluminum hydroxide, with each meal for five days, the calcium in the blood increased, the phosphorus decreased and the leg cramps were relieved.

The aluminum hydroxide preparation was used to remove from the intestinal tract the phosphorus from foods, thus preventing its getting into the blood stream and causing leg cramps. This treatment was used, rather than cutting down on phosphorus rich foods because phosphorus-rich foods are the protein foods. Reducing the protein in the diet of pregnant women would not be good. For the same reason, Dr. Page advises only a "moderate" reduction of milk.

Science News Letter, June 21, 1952

## ENGINEERING

## Magnetic Switch Gives Fast Telephone Circuit Selection

► A MAGNETIC switch has been developed by Bell Telephone Laboratories which can select the proper telephone circuit and hook into it in less than three-thousandths of a second while a person dials a number.

Called relays, the switches are more easily manufactured and adjusted than the ones they are designed to replace. They also have higher operating efficiencies, longer life, and require less power to operate.

In announcing the new development, the Bell research organization pointed out that the switch has a life expectancy of one billion operations, equivalent to one switching movement every second for more than 30 years.

Limited production of the switches is scheduled for the next 18 months while local telephone companies try out the new devices.

Science News Letter, June 21, 1952

## ENDOCRINOLOGY

## Cortisone Helps Childless Women Have Desired Babies

► CORTISONE, FAMOUS as an arthritis remedy, has helped some childless women have the babies they longed for, Drs. G. E. Seegar Jones, J. E. Howard and H. Langford of Baltimore reported at a meeting in Chicago of the Endocrine Society.

These women were of the bearded-lady type although they were not conspicuously masculine. Apparently their hairiness and failure of normal ovarian function resulted

from underfunctioning of part of their adrenal glands. Doses of cortisone, one of the adrenal gland hormones, supplied the deficiency and resulted in normal female gland functioning and pregnancy in some cases.

Patients whose ovaries were not functioning normally but who were not bearded were not helped by cortisone.

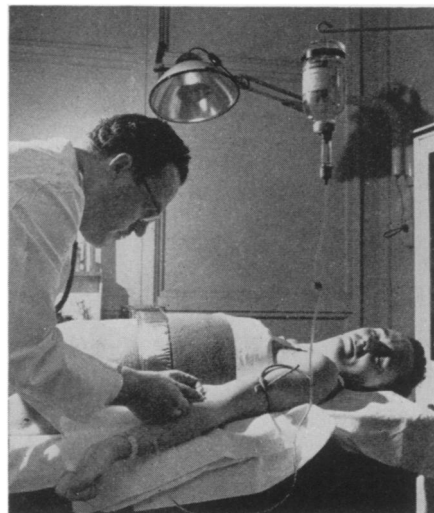
Irradiation to the pituitary gland in the head and the ovaries was the most effective treatment for women whose involuntary sterility was due to failure of their ovaries to form and release egg cells, Dr. Samuel L. Siegler of Brooklyn, N. Y., reported.

This condition was diagnosed in about six out of every 100 of the nearly 1,000 patients he examined. Of the 55 treated with hormones, irradiation and surgery, according to which seemed needed, 44 developed regular cycles of egg formation and release, 26 became pregnant once, one patient was pregnant twice, four patients miscarried at two to four months and 23 had normal babies.

The "thyroid myth" in connection with sterility was debunked by Dr. Edward T. Tyler of Los Angeles.

The thyroid gland extract is probably the most commonly used hormone in the treatment of sterility and many physicians use it almost routinely for this purpose. In spite of this, the statistical evidence in favor of it is not "too impressive," Dr. Tyler declared. In his opinion it should be used only when there is definite evidence of underfunctioning thyroid gland.

Science News Letter, June 21, 1952



**SYNTHETIC BLOOD EXTENDER**  
—PVP-Macrose, a liquid having many of the desired properties of whole blood and plasma, is administered to patients just like a blood transfusion. The substance requires no refrigeration, and could be used in case of an atomic attack on the United States or for other mass emergency treatments.