

## AERONAUTICS

# Jetting to 50th State

TIME IS NOT the prime necessity to get about the world fast these jet-transport days. It is money, and actually not too much of that.

One can go from Honolulu to Chicago in less than the standard eight-hour working day, actually 7 hours and 52 minutes non-stop, as a party of newsmen did on Washington's Birthday aboard one of United Airlines' new DC-8 jet transports with J-75 engines. This is the same kind of jet mainliner that United will use to begin regular passenger service between San Francisco and Los Angeles and Honolulu on March 14.

The Honolulu-Chicago record will probably not be equaled or exceeded soon because it probably will not be a regular run. A stop on the West Coast will increase the time of the journey only about an hour or less and give the opportunity to carry intermediate passengers.

The scheduled time westward from San Francisco by jet to Honolulu is 5 hours and 15 minutes, which is not too much more than the 4 hours and 26 minutes taken by the liltily expressed "DC-8 to the 50th State" flight three days earlier. The regularly scheduled eastward flight will be faster, due to the favorable winds, a matter of 4½ hours, and then five hours more to New York.

On the press flight, even with the refueling at Chicago and the change to a regular propeller-driven DC-7B at Idlewild, I arrived at Washington only 12½ hours after leaving a gala Honolulu evening that ended at 4 a.m. (that is expressed in Eastern Standard Time, I hasten to add.) Actual flight time on forthcoming regular schedules is 11 hours and 20 minutes.

With jets coming of age in the Pacific after more than a year of crossing the Atlantic and trail-blazing in other parts of the world, jetting to more distant lands is in the offing. They are reaching out into the Far East, chopping days off travel time formerly necessary. They will bring such romantic sounding spots as Tahiti, a thousand miles from Honolulu, into jet-reach, although before that happens an airfield must be built there. A thousand miles is only about two hours in the DC-8, traveling at the 550 miles per hour that was averaged on the 4,313-mile Honolulu-Chicago press flight.

Dollars? It depends on how you go. From San Francisco to Honolulu, about \$150 to \$200 will take you there, coach and first class, give or take a few dollars. The one-way fare is estimated because you may wish to stay there.

W.D.

Science News Letter, March 5, 1960

## MEDICINE

## Woman Herself Is Best Guinea Pig for Test

THE WOMAN herself is the best "guinea pig" to use to determine whether or not she is pregnant.

Female hormone tablets will produce more accurate results than the rabbit, frog or mother animal tests that have been used for the past 25 years, Dr. Harold A. Schwartz of Chattanooga, Tenn., told members of the Indiana Academy of General

Practice at Fort Wayne, Ind. Furthermore, the vice president of the Tennessee Obstetrical and Gynecological Society added, the hormone test eliminates the need for laboratory work.

The test is based on a natural hormone reaction of the human body. The basic element of the test is progesterone, the female hormone which has the function of preparing the lining of the womb to receive and nurture the fertilized ovum.

When a woman misses her period and has reason to believe she is pregnant, progesterone is given to her for three days, then withdrawn, Dr. Schwartz explained.

If she is pregnant, the hormone will help implant the ovum properly, while the patient is completely unaware of any change.

On the other hand, if she is not pregnant, menstrual bleeding begins a few days after the last dose of hormone. In such cases the woman has been the victim of amenorrhea, or missed periods.

Experimentation with the various methods of administering progesterone, including by injection and tablet, plus in combination with other hormones, has led Dr. Schwartz to this conclusion:

Tablets will answer the question of pregnancy quicker than other forms. The tablets he used on 220 patients were called Pro-Duosterone.

He warned colleagues not to expect an accurate result in women who have had a history of irregular periods of three months duration or longer.

Science News Letter, March 5, 1960

## PUBLIC HEALTH

## Report on Radiation Dose Urges Conservatism

THERE IS NOT enough evidence to show that radiation can produce bodily harm at low levels, so an Ad Hoc Committee of the National Committee on Radiation Protection and Measurements "has chosen to make the cautious assumption" that there is a proportional relation between dose and effect, and that the effect is independent of the dose rate.

With this as a starting point, the Committee publishes its conclusions in *Science*, 131:482, 1960. They include:

1. Even the smallest dose is associated with some risk, and exposure of the general population to any increase in radiation should not occur unless benefits are expected.

2. The establishment of permissible doses of man-made radiation should be based on the average natural background radiation level.

3. For sources such as radioactive strontium and iodine, which tend to concentrate in certain body organs or tissues, the maximum permissible dose should be established in terms of the tissue or organ expected to receive the most radiation.

4. Maximum permissible doses must be set for food, water and air so that the average person will not receive more than the permissible dose when all sources are combined.

Science News Letter, March 5, 1960



**FLIGHT TO HAWAII**—Powered by four Pratt and Whitney J-75 engines, a United Air Lines DC-8 Jet Mainliner speeds toward Hawaii. On March 14 jet service will be introduced between the Hawaiian Islands and California. The eastward flight will take only four and a half hours.