

OBSTETRICS

Women Warned on Drugs

Large amounts of aspirin or other pain-relieving drugs are dangerous during pregnancy, since they may obscure the warning signs of more serious trouble—By Faye Marley

► A PREGNANT WOMAN should not take large doses of aspirin or any other drug.

Dr. Samuel M. Dodek, clinical professor of obstetrics and gynecology, George Washington University School of Medicine, Washington, D. C., told SCIENCE SERVICE that headaches and arthritis, for which aspirin is often taken in large doses, usually improve during pregnancy. In any case, however, aspirin would not be advisable in large quantities at that time.

A severe headache should be studied for its cause, Dr. Dodek said, and the taking of aspirin, by relieving its pain, could easily mask more dangerous trouble.

For example, warning of impending eclampsia, the convulsive toxic disorder that sometimes occurs near the end of pregnancy, may be given by intense headache, but if pain is absent, the warning could be missed.

Some time ago, Dr. Dodek said, quinine and castor oil were commonly given to pregnant women to bring about her labor pains, but he has not used this method for about 20 years. The auditory nerve of the

fetus can be injured by quinine, and the baby's hearing endangered.

Dr. Frances O. Kelsey, head of the investigational drug branch of the U.S. Food and Drug Administration, who saved many pregnant women from thalidomide babies by banning this sedative drug told SCIENCE SERVICE that she had done research on quinine and found that this drug is less readily metabolized by the pregnant woman.

"Drugs are metabolized differently when a woman is pregnant," she said.

The modern drug for inducing labor, Dr. Dodek explained, is pituitrin, derived from the pituitary gland located at the base of the brain. Careful supervision by an obstetrician is necessary, however, to prevent continuous contractions of the uterus without rest for the mother.

Pituitrin is available both in the natural and synthesized form. Synthesized pituitrin has two advantages over the natural type. It does not raise blood pressure, and it is free of protein, which sometimes causes allergic reactions to the natural form of the drug.

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DENTISTRY

New Dental Office Chairs

► THAT TRIP to the dentist's office will soon become a more comfortable affair, for dentist as well as patient.

Research by Dr. Sanford S. Golden, assistant professor at the human factors research division at the University of Southern California School of Dentistry, Los Angeles, has revealed that new designs in chairs for dentists and their patients will make visits to the dentist shorter and less annoying.

During a six-year period Dr. Golden studied 5,000 patients ranging in age from 7 to 65, in height from 4 feet 1 inch to 6 feet 3 inches and in weight from 71 to 191 pounds.

He found that a reclining lounge-type chair gives better support than a conventional dentist's chair and allows patients to relax more.

By enabling a patient to lie on his back and distribute his weight over a large area, the new chair increases comfort and decreases strain on the heart, muscles and spine.

Dr. Golden found that a volunteer was able to sit for 12 hours without discomfort in the new chair. He became uncomfortable after less than one-half hour in a conventional chair, and after 10 hours gave up entirely.

A new posture-designed stool similar to a stenographer's chair will enable the dentist to "sit down on the job" and decrease the strain on his heart.

More than one-half of all dentists die of circulatory diseases, Dr. Golden said. Persons who sit while working live 17% longer, on the average, than those who do the same work standing up.

Dr. Golden reported his research to Mechanical Engineering, 86:39, 1964.

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BIOCHEMISTRY

Cancer-Linked Chemicals Studied by Institute

► TWO GOVERNMENT AGENCIES, seemingly unrelated, will cooperate in a one-year project to study the cancer-preventing and cancer-causing properties of a family of chemicals closely related to plant growth regulators.

The National Cancer Institute will use funds from the National Aeronautics and Space Administration to support research at North American Aviation, Inc., Downey, Calif. The study could benefit not only cancer victims but also astronauts needing chemical protection against radiation.

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General Dynamics

REVERSE OSMOSIS—A modified cellulose acetate membrane developed at General Atomic division of General Dynamics, San Diego, Calif., is prepared for testing this simple process for converting seawater into fresh water. The modified membrane has water permeabilities 500 times greater than before, but holds back salt and other dissolved solids.

BIOCHEMISTRY

Tobacco-Smeared Mice Found to Develop Tumors

► CHEMICALS THAT cause tumors are present in commercial raw cigarette tobacco, an investigation indicates.

Tumors developed in some mice treated with extracts of the tobacco after being painted with a chemical that sets the condition for tumor growth. Other groups of mice given only the tumor-initiating chemical, or only one of the tobacco extracts or no treatment at all did not develop tumors.

Dr. Fred Bock, associate cancer research scientist at Roswell Park Memorial Institute, Buffalo, N.Y., said the study also indicates that chemicals in raw tobacco must react with these tumor initiators to produce tumors.

The tumor-producing chemicals in raw tobacco could be the same ones present in cigarette smoke that some claim cause cancer in man. If this is the case, tumor-producing chemicals of unburned cigarettes may pass into the smoke and into the smokers' lungs where they combine with tumor initiating chemicals to develop cancer, Dr. Bock said.

"If such a process does take place, removal of the tumor-promoting chemical from the raw, unburned tobacco should aid in the development of less hazardous cigarettes," he said. "However, at the present time we do not know that this is true. Much additional research will be needed to answer the problem."

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