

PUBLIC HEALTH

Measles Threat to Unborn

A woman who contracts German measles during her first month of pregnancy, the "high-risk" period, has only a 50% chance of having a normal baby.

► **THE DANGER** of having an abnormal baby when a woman gets German measles, or rubella, in the first month of pregnancy is estimated at 50% from studies made in Bethesda, Md.

Whether or not to perform an abortion in such cases is up to the attending physician and the parents in many states. The mental health of the mother is usually the determining factor in this country. Dr. John L. Sever of the National Institutes of Health pointed out that there is a difference of opinion as to whether the pregnancy should be ended to prevent the birth of a hopelessly deformed baby.

Factors to be considered by the doctor when deciding whether to perform an abortion were given in *The Lancet*, 11:373, 1964.

The most "important single factor," said Dr. John Rendle-Short of the University of Queensland, Australia, is the age of the fetus at the time the mother contracts the disease. This agrees with Dr. Sever's statement on the high risk during the first month of pregnancy.

Dr. Sever's figures are based on work with approximately 100,000 mothers and babies in cases where German measles might have caused deformity.

Dr. Sever is head of the section on infectious diseases of the perinatal research branch of the National Institute of Neurological Diseases and Blindness. Death or severe damage to the unborn baby can follow a mother's infection with rubella and nine other viruses.

Dr. Rendle-Short points out that he has been asked by "several" Roman Catholics

whether or not pregnancy should be terminated when the mother-to-be has German measles early in its course.

"This is a matter for the parents to decide in the light of their religious beliefs," Dr. Rendle-Short stated.

Dr. Rendle-Short said physicians faced with terminating pregnancy endangered by rubella infection should bear the following in mind:

Be sure the infection is really German measles.

Consider the age of the parents and ease of conception. Young parents presumably have plenty of time to have another child. In older parents, especially those who have difficulty in conceiving, abortion should be avoided.

The parents' knowledge of the possible effect on their child must be taken into account. Parents are more likely to be influenced by a well-known family practitioner than by a specialist.

When extramarital conception has taken place, a doctor's reputation will be at stake if he performs an abortion, even if it is for the good of the mother and child.

Dr. Sever points out that unless a woman plans to have an abortion to prevent having an abnormal child as a result of contracting rubella during the early months of her pregnancy, she should be given gamma globulin to counteract the effects of the virus and also have blood tests to be sure she really has had a recent infection with the virus.

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PUBLIC HEALTH

Arthritis Hits Millions

► **MORE THAN 12 million** persons in the United States have arthritis and related rheumatic diseases, states the 1964 report on major killing and crippling diseases by the National Health Education Committee in New York City.

Second only to heart diseases among the widespread chronic illnesses in the United States, arthritis and rheumatic disorders claim about 250,000 new victims each year. Rheumatic disease alone is the nation's number one crippler.

Occupational groups most likely to become afflicted with these diseases are farmers and factory workers, the report said. Three times more women than men suffer from these diseases, however.

Rheumatoid arthritis, worst of the rheumatic cripplers, afflicts 30% to 40% of all persons visiting physicians for rheumatic disorders. Although there is no specific cure

for this disease, crippling can be prevented in up to 70% of such cases with early and proper treatment.

Osteoarthritis is a painful and often disabling form of arthritis most common in persons who are beyond middle age. There is no specific cure for this disease.

An inherited metabolic disorder, gout, the cause of which is unknown, is much more common than is believed. There are some 400,000 gout sufferers in the United States. Gout is one of the few rheumatic diseases that can be treated effectively with known therapy.

Rheumatic fever, which leads to rheumatic heart disease in about 33% of cases, can be prevented by penicillin. This treatment is directed primarily to suppressing heart inflammation, and can cut recurrences of rheumatic fever to two percent.

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ZOOLOGY

Alligators, Sharks, Help Navy Study Sea Survival

► **ALLIGATORS AND SHARKS**, two of man's most dangerous enemies in water, are helping U.S. Navy researchers find new means of survival at sea.

Alligators can remain under water for two hours before running out of oxygen. During that time their hearts beat only two or three times a minute, researchers have found. This discovery is being applied to a study of human survival beneath the sea or at high altitudes in the event of oxygen supply emergencies.

Dr. Perry Gilbert, Cornell University, Ithaca, N.Y., has taken an electrocardiogram of a free-swimming shark. This study, made under contract to the Office of Naval Research, will help reveal the shark's reaction to chemical repellents, which are of vital importance in protecting man against the shark.

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PHYSIOLOGY

Sour, Salty Foods Make Single Taste in Mouth

► **WITH A SOUR BALL** on one side of his mouth and a salty peanut on the other, a person experiences only a single, blended taste in the middle of his tongue. But if he takes out the sour ball and substitutes a lump of sugar, two distinct tastes result.

These are some of the findings of Harvard University physiologist Dr. Georg von Bekeky, who concludes that taste sensations on the tongue can be divided into two groups: bitter, sweet and warm; and sour, salty and cold.

His is believed to be the first study in which hot and cold water are used together with the four primary taste sensations.

The research on taste patterns is part of a basic and theoretical study seeking similarities between hearing, vision and taste, Dr. von Bekeky said. Some similarities have already turned up. Taste seems to have "direction" much as hearing and smell do.

He placed a plastic plate with two openings on each side on the tongues of three subjects. Quinine was used for a bitter taste, cane sugar for sweet, hydrochloric acid for sour and sodium chloride for salty.

He dropped hot and cold water on the tongues at various intervals, together with the other substances, and measured changes in taste sensations.

His findings indicate that cold water can change the taste of salty and sour substances, but will not affect the taste of bitter and sweet substances. On the other hand, hot water affects the bitter and sweet, but not the salty and sour.

He further found that a sour substance will give a single new taste when put on the tongue with a salty substance, but it will produce two distinct tastes when combined with either a bitter or sweet substance.

Dr. von Bekeky's findings were reported in *Science*, 145:834, 1964.

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