

## SURGERY

**Operation for Backache Brings Relief of Pain**

► A NEW operation for backache has brought complete relief of pain for more than three years in two patients and for shorter periods in five more operated on more recently, Dr. Robert Dean Woolsey of Saint Louis University School of Medicine, St. Louis, Mo., reported at the meeting of the Southern Medical Association in Atlanta, Ga.

The operation is for spondylolisthesis, a condition in which the fifth lumbar vertebra is displaced over the first sacral vertebra in the advanced stages.

Dr. Woolsey explained that the severe back pain has been attributed to normal pull on the articulating facets of the fifth lumbar lamina (the part covering the spinal canal) with the first sacral segment, and the sciatic pain has customarily been attributed to compression of nerve roots or to concomitant intervertebral disc lesions of the fifth lumbar vertebra and the first sacral vertebra.

In the past, many surgeons believed that spinal fusions were essential in the correction of spondylolisthesis, but of the seven cited by Dr. Woolsey, ranging in age from 15 to 69, only one had a spinal fusion.

He explained that the operations were done too recently for conclusive proof of permanent cure, but that none has experienced pain and that the first two, a 69-year-old woman and a 38-year-old man have had complete relief of pain and symptoms since their operations more than three years ago.

The surgical procedure recommended involved removal of the fifth lumbar lamina, spine, inferior articulating facets and complete decompression of the fifth lumbar nerve root and first sacral nerve root.

He emphasized the necessity of complete and accurate diagnosis, recalling one of the cases was almost discounted as a neurotic when X-rays failed to show a ruptured intervertebral disc. He said that the physical findings depend largely on the degree of the spondylolisthesis.

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## NUTRITION

**Ready-to-Serve Meals Cost a Third More**

► IT TAKES the homemaker one-fourth the time but costs over a third more money when she feeds her family from ready-to-serve foods instead of all home-prepared foods.

These results from a test by home economists of the U.S. Department of Agriculture were reported at the Department's Outlook Conference in Washington.

Ready-to-serve foods in the test included, for example, frozen beef pie, canned berries, and butterscotch-nut pudding from a mix requiring no cooking. Tested also, for com-

parison with these and with homemade beef pie, fresh berries and homemade butterscotch-nut pudding, were frozen berries, beef pie from canned meat and a pastry mix, and the pudding made from a mix requiring cooking. This was classed as partially prepared food.

The test was made by two trained home economists, one working in the laboratory and one in her own home kitchen. Meals for a family of four, including two children, for two days were prepared from foods available in supermarkets in the District of Columbia last July. Time included that for preparation of food; washing, drying and storing utensils and equipment used in preparation; setting table and serving the meals, but not washing dishes, silver or glassware or cleaning kitchen after meals.

For one day, home-prepared meals cost \$4.90, took 5.5 hours to prepare. Partially prepared meals cost \$5.80, took 3.1 hours to prepare. Ready-to-serve meals cost \$6.70, took 1.6 hours to prepare.

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## TECHNOLOGY

**Plastic "Cans" Protect Bananas in Shipment**

► SOUTH AMERICAN bananas now are being "canned on the stem" for shipment in a transparent plastic film one-thousandth of an inch thick.

Fruit producers and shippers alike have found that the protective wrapping preserves the lusciousness of the freshly harvested fruit. By holding in the fruit's moisture, the Bakelite polyethylene film delivers the bananas to the consumer less dehydrated than those that are unprotected. The bananas also can be ripened to a brighter yellow.

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## VETERINARY SCIENCE

**Fall Weather Brings Pig Flu Conditions**

► THE SUDDEN weather changes associated with early autumn are ideal conditions for swine influenza outbreaks if special precautions are not taken.

The American Veterinary Medical Association warns all swine raisers to watch for signs of coughing or "thumpy breathing" in their pigs. Treatment of the disease is most effective if it can be started early.

Good housing for the animals, particularly draft-free quarters, are recommended to help prevent outbreaks.

Since the virus causing the disease is carried by earthworms, swine raisers should keep their pigs away from strawstacks where large numbers of earthworms can usually be found.

Though seldom fatal, swine influenza is a "profit-robber" since it sets weight gains back and reduces the resistance of pigs to other diseases.

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**IN SCIENCE**

## VOLCANOLOGY

**Krakatoa Active Again, Explodes Frequently**

► KRAKATOA, FAMOUS East Indian volcano reported erupting again, has been exploding on and off since 1926, Dr. E. G. Zies of Carnegie Institution's Geophysical Laboratory in Washington stated, so it is "not surprising" that it should act up again.

The cinder cone built by previous eruptions has been cut down to the water level several times in the last 30 years, Dr. Zies said, and probably enough new lava has now been built up to form the cone again. Because there is probably not enough material, however, the present eruptions are not expected to be as violent as the one in 1883, the tidal waves from which killed at least 36,000 people. That outburst threw so many tons of dust into the air that red sunsets were seen around the world for two or three years afterwards.

There are about 450 active volcanoes in the world today, and any one of them might perform destructively. By keeping a constant watch on some volcanoes, such as Vesuvius, Kilauea in Hawaii or Krakatoa, geologists have learned to spot some of the danger signs that help to warn of impending eruptions. For Krakatoa, one sign is a roiling up of the water once occupied by the central portion of the volcano. Scientists at the Bandung Volcanological Station on Java usually visit the volcano every month or so on inspection trips.

To geologists, volcanoes are surface phenomena, even though they do erupt with tremendous violence. The origin of their heat and energy is at most 25 to 30 miles below the surface of the earth. If the modern superlative for big explosions is the hydrogen bomb, the volcano is a super-superlative. Volcanic explosions, such as Krakatoa or Katmai in Alaska, Santa Maria in Guatemala, Coseguini in Nicaragua and Pelee in Martinique, let loose far more energy than any bomb man has yet set off.

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**Jet-Made Vapor Trails Form Large Sky Pattern****See Front Cover**

► IN THE largest formation of jet fighters believed ever to have been assembled, more than 100 North American F-86 Sabre Jets passed in review at Nellis Air Force Base, Nev., for the outgoing post commander.

The mammoth sky pattern made by some of these jets and their vapor trails is shown on the cover of this week's SCIENCE NEWS LETTER.

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# CE FIELDS

## MEDICINE

### Advise Iron Shots for Anemia in Arthritis

► INJECTIONS OF iron into the veins is "always worth trying" in rheumatoid arthritis patients who are anemic, with two exceptions, Dr. M. R. Jeffrey of the Rheumatism Research Unit of the South-west and Oxford Region, Bath, England, declares in the *British Medical Journal* (Oct. 24).

The two exceptions are severe constitutional disturbance and prospective surgical operation. In these situations, a rapid rise in hemoglobin is wanted and blood transfusion would give this.

Some patients with the anemia that often comes with rheumatoid arthritis do not benefit from iron injections. This was the case in about one-fourth of the patients he studied. Women were helped more often than men.

Dr. Jeffrey tried to find some test for determining which patients would be helped by the iron shots. Because he could not find any satisfactory test for predicting which patients will be helped, he advises always trying the iron shots.

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## PUBLIC HEALTH

### 'Flu-Free Winter Seen Coming Up

► PROSPECTS SEEM good now for a winter without an epidemic of influenza. In fact, one health authority is betting that we will not have any 'flu epidemic this year.

His bet is based on the way the two main types of influenza repeat themselves. Influenza A usually does not repeat oftener than every two to three years. We had an epidemic of influenza A last year, so that type is unlikely to trouble us this coming winter.

Influenza B repeats every four to six years. The last epidemic of that type of 'flu was only two years ago. That seems to mark off any epidemic of influenza B this coming winter.

Predictions of epidemics of disease, particularly influenza which travels so fast, are always hazardous. Health authorities rarely will make them officially, but in shop talk among themselves they make what could be called educated guesses which often hit the mark.

Influenza is no longer a reportable disease in the United States. That is, state health officers no longer send weekly reports on it to the Public Health Service here, though they do report any unusual number of cases occurring in their respective states.

The Influenza Information Center at the National Institutes of Health, Bethesda, Md., and the National Office of Vital Statistics in Washington get reports from various quarters on the prevalence or non-prevalence of the disease.

Their latest report includes one from the Surgeon General of the Army stating that since the latter part of August there has been a slight increase in influenza-like illness among Army personnel in the Far East. In Okinawa two cases occurred in the middle of September which showed signs of being influenza A.

Type B influenza has been prevalent in the State of Western Australia, Australia, but has waned in Melbourne, according to reports received by World Health Organization headquarters at Geneva.

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## GENETICS

### Shetland Pony Type Interests Scientists

► SILVER-DAPPLED SHETLAND ponies excite not only the delight of pony breeders and owners but also the interest of scientists studying genetics, the science of heredity.

Dr. W. E. Castle of the University of California, Berkeley, and Dr. Frank H. Smith of the University of Michigan report that all ponies of this distinctive color may be traced back to Trot 31, a mare born in 1886 whose unusual and striking markings were doubtless due to a mutation.

Mutation is the name given by geneticists to the sudden appearance of a completely new characteristic in an animal. It involves a change in the genes and chromosomes—the basic elements of heredity.

The silver dappled pony has a body the color of spotted dark cream with a striking white mane and tail. The scientists advance the theory in the *Journal of Heredity* (July-Aug.) that this coloration is due to the mutation of a gene which dilutes or modifies a dominantly black pigmentation.

Trot produced a sorrel mare and when this mare was bred to an intensely black stallion, the offspring was the silver dappled stallion Chestnut. All of the popular silver dappled ponies shown in horse shows today are descended from this stallion.

Whenever the dominant modifying gene is coupled with a dominant black gene the result is a silver dappled pony. Other genetic combinations give rise to sorrel ponies with white mane and tail.

Mutant modifiers of black pigmentation are well known in laboratory animals such as rats and mice. The only difference is that in the rodents the modifier is recessive, while in the pony it is dominant.

In both rats and mice, a mutation called pink-eye renders the black pigment so pale that its presence in the eye can be seen only with a microscope.

The geneticists argue that the existence of mutant modifiers in other animals makes their theory that this is the case with silver dappled ponies a reasonable hypothesis.

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## MEDICINE

### Predict Greater Baby Saving Within Five Years

► THE NEXT five years will see a further saving of lives of newborn babies, Dr. William H. Vogt Jr. of Saint Louis University School of Medicine, St. Louis, Mo., predicted at the meeting of the Southern Medical Association in Atlanta, Ga.

Premature babies weighing less than two and three-quarter pounds are now being saved, he said, though formerly that weight was considered the dividing line between babies too small to live and babies big enough to survive.

Of 238 deaths among a total of 16,432 deliveries in the Saint Mary's Group of Hospitals, Saint Louis University, in the last five years, prematurity was listed as the principal cause of death in 135 cases, 49 of which weighed less than two and three-quarter pounds. In the five-year period 1943-1947, 74 deaths of 129 who died, out of 8,989 total deliveries, were attributed to prematurity.

First on the list of improvements in obstetrical care Dr. Vogt suggested was the more frequent use of blood transfusions in caring for the mother, and the infant, but particularly the exchange transfusions of newborn babies with erythroblastosis (Rh blood trouble).

During the five-year period just finished, the number of deaths from erythroblastosis was the same as the five-year period from 1943 to 1947, although the total number of deliveries in the first period considered was only about 60% of the number delivered in the past five years, the obstetrical facilities and the nursery having been expanded to nearly twice its former capacity three years ago.

Dr. Vogt also listed as helping save new babies the use of antibiotics, the development and refinement of surgical procedures designed to correct cardiac and other bodily abnormalities, and better facilities for care of the newborn, particularly the premature, in the nursery.

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## MEDICINE

### Giant Tonsils Hamper Breathing, Swallowing

► A RARE case of tonsils growing so big that they interfered "considerably" with breathing and swallowing was reported by Dr. James T. King of Atlanta, Ga., at the meeting of the Southern Medical Association in Atlanta, Ga.

These giant tonsils grew in the throat of a 67-year-old Negro, who is almost the only patient on record with such a condition. Dr. King could find only one other case in English and American medical literature, and in that case, the condition may have been cancerous, which was not true in Dr. King's patient. He was relieved by having his tonsils removed.

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