

MEDICINE

Aspirin Heals, Kills Pain

➤ ASPIRIN can be a healer as well as a pain killer. Larger and larger doses of aspirin for arthritis sufferers who can tolerate increased dosage of this drug are being suggested as a result of research.

In crippling rheumatoid arthritis, two Boston physicians told the meeting of the American Rheumatism Association, San Francisco, that inflammation went down in three-fourths of the rheumatoid arthritis patients studied when they were given 17 aspirin tablets in a 24-hour period, which is the maximum dose.

In osteoarthritis, the most common type of the disease, which affects the joints, animal experiments reported by a team of Yale Medical School scientists show promise for humans who may be given large doses of aspirin.

This does not mean that every arthritis sufferer should start consuming huge amounts of aspirin, but doctors are regarding this common drug with increased respect. The question has long been under study as to whether aspirin is only a pain killer.

In osteoarthritis, the joint cartilage breaks down, thus causing the pain that aspirin relieves.

The Yale professors had already discovered an enzyme they believed was responsible for part of the joint cartilage breakdown due to slowing up the viscosity within the cartilage. By adding sodium salicylate, similar to an ingredient of aspirin in test tube experiments, they found that the reduction process was significantly slowed.

The next step was the study of the effects of salicylates on damaged cartilage in animals. The researchers created a condition in rabbits that resembled human osteoarthritis and fed some of them high dosages of aspirin. They theorized that if the enzyme action could be slowed, cartilage damage could be prevented.

They were right. The joint cartilage of the animals that had not been given aspirin showed marked softening, but the other animals, given high dosages of the drug, were spared the damaging changes.

David P. Simmons and Dr. O. Donald Chrisman, who did this research, predict that if similar results are obtained in humans, aspirin may prove itself capable of preserving the "articular" or joint-related cartilage.

The rheumatoid arthritis research was done with 12 patients at the Robert Breck Brigham Hospital in Boston by Drs. Kenneth Fremont-Smith and Theodore B. Bayles, who were emphatic in their testi-

mony that maximum doses of aspirin reduced inflammation in the majority.

Seventy-four percent of their patients showed "unequivocal and persistent" improvement, they said, and when the drug was withdrawn, 55% showed "definite and persistent worsening."

The Boston physicians said that unless there were individual reasons for not giving large doses of aspirin, "all patients with active rheumatoid arthritis of whatever severity should receive salicylates regularly in largest tolerated dosages, irrespective of other forms of therapy employed."

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PUBLIC HEALTH

Students Survey Changes In Smoking Habits

➤ POSSIBLE CHANGES in the smoking habits of senior medical, dental and osteopathic students are being surveyed by the Student American Medical Association (SAMA) with the cooperation of the U. S. Public Health Service.

The survey is aimed at finding out the effect of the January report of the Surgeon General's Advisory Committee on Smoking and Health.

Copies of the full report will accompany questionnaires being sent to approximately 11,000 students in the health profession. SAMA will return the questionnaires to the Health Service in Washington, D. C., where PHS physicians, psychologists and statisticians will study the results. This study is expected to guide the development of future professional education and information programs, and materials.

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Do You Know?

A vaccine tested in Saudi Arabia has been successful in diminishing the attack rate of *trachoma*, a major cause of blindness in many countries.

More than 4,500 million tons of coal reserves or enough coal to fill two trains extending from the earth to the moon has been discovered in the upper Ohio River valley area.

A safe telephone set for use in coal mines and other hazardous places where combustible gases can be ignited by electric sparks has been developed.

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TECHNOLOGY

Electron Beam Used To Find Crystal Defects

➤ SCIENTISTS can now determine internal defects in the crystals of semiconductor diodes without damaging them. An electron beam is used to scan the crystal and spot the defects in the diodes such as used in electronic apparatus. The technique was developed by the Bell Telephone Laboratories.

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Nature Note

Bats

➤ A BIG NOSE "LEAF" or leafy outgrowth on the lips has given an American family of bats the name Phyllostomatidae, "leafy-mouth."

The nose leaf is an outgrowth of skin and muscle on the mouth and lips of the bat, which varies according to species. Although the outgrowth's function is not certain, scientists believe it may act as an antenna to receive the air vibrations created by flying insects.

Bats are well known for their supersensitivity to sounds. Their natural system of radar causes them to utter continuously sounds pitched too high for the human ear. When the sound waves are reflected, the bat is able to judge his location in relation to other objects and avoid collisions.

Members of the widely diverse Phyllostomatidae family feed on insects, fruit, flower pollen and nectar, and in some cases, flesh.

Outstanding members of the family include America's biggest bats, the Javelin Bat, *Phyllostoma hastatum*, and the False Vampire Bat, *Vampyrus spectrum*. These two hideous black creatures with their powerful jaws and strong teeth will kill and eat small birds, mice, frogs and other bats as well as fruit and insects.

At the other extreme of the family are tiny, long-tongued bats having teeth that cannot crush a beetle. A Mexican nectar-loving bat dips his long tongue into the flowers of certain cacti to obtain his food.

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