

MEDICINE

Drugs Fight Cancer's Pain

➤ DEATH may bring the only complete relief from the pain of advanced cancer. But doctors have weapons against this pain. The list includes morphine and several newer, powerful drugs, nerve and brain operations, alcohol injections, hypnosis and psychology.

A good example of the psychological weapon against pain comes from methods being tried at Yale University Medical School and elsewhere for relief of the pain of childbirth. You have read about it as "natural childbirth." Part of the method consists in teaching expectant mothers what to expect and so to abolish their fear.

Fear is an important component in pain. When it can be eliminated, the suffering is less. And the pain in the second stage of childbirth registers ten and a half dols, which is the top of the pain scale developed by scientists at New York Hospital-Cornell Medical Center.

Psychiatrists recognize distraction as one of our fundamental defenses against suffering. Amnesia, or loss of memory, is an example of the way in which distraction is sometimes used as a defense against painful experiences. A more familiar example is sleep. You have undoubtedly heard someone say he is going to sleep to forget his troubles, or he is going to sleep off a headache.

Of the newer pain-relieving drugs, metopon is considered one of the most useful for advanced cancer. Like morphine, it must be used judiciously, because patients develop tolerance to it. This means that more of the drug, and still more is needed

to relieve the pain. Eventually it may not have any effect at all.

The pain varies from day to day. The wise doctor, and the wise patient, recognize that it is better to have a little pain today than a lot next week. So the doctor will not give a larger dose immediately when the patient starts worrying because he has more pain today. He waits to see whether the pain is not a little better tomorrow.

This matter of the worry over pain has been relieved in some cases of advanced cancer by the brain operation, lobotomy. Devised originally for mentally sick patients, it has been described as removing the "worry center." Actually nothing is removed in the operation. The surgeon merely cuts nerve connections in the frontal lobes of the brain. In depressed patients this seems to stop the chain of troubled thoughts and relieve the patient's deep unhappiness. When used for intractable pain, it does not stop the pain but does stop the patient's concern over it. Patients say they still feel the pain but it "does not bother" them any more. Although considered a relatively simple operation, its results are not uniformly successful.

Another kind of nerve-cutting operation has also been used, with success in some cases, for relief of intractable pain. This consists in cutting the nerves to the part of the body where the cause of the pain is located. Injecting alcohol into the nerve carrying the pain sensation helps in some cases.

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liner is delayed by the cost. Certain manufacturers seem to think that the federal government should give financial aid in the development and construction of early types. They point out that jetliners developed for civil transports could be used for war purposes in an emergency.

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INVENTION

Sound Waves Help Blind Men Dodge Obstacles

➤ SOUND waves too high in pitch to be heard by the normal ear are put to work in a device to help blind men dodge obstacles as they walk about, for which a government patent was recently issued.

Ultrasonic waves, as such high-pitched sound waves are called, are sent out from a mechanism in the blindman's walking cane. Waves reflected from an obstacle ahead are picked up by a receiver on the cane. Their energy is converted into electric pulses that travel by wire to the ear where, by means of a type of microphone, the pulses are translated into audible sound.

A miniature electric battery, carried on the person of the user, provides the needed electric energy for operation. The sound waves are created by an electric device, or by a pneumatically operated whistle which acts when the end of the cane is pressed against the pavement.

The inventors of this aid to the blind are John W. Richardt, Jr., Terre Haute, Ind., and Oscar A. Shann, Short Hills, N. J. Rights have been assigned to Bell Telephone Laboratories, Inc., New York City. Patent number is 2,496,639.

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AERONAUTICS

Jetliner To Cross Atlantic

➤ A VISIT to England is to be made in September by the new Canadian jet-propelled, 50-passenger airliner, the A. V. Roe Canada Limited, its builder, has announced. Jet fighters have crossed the Atlantic, but no jet-propelled craft of the airliner type or bombers have as yet done so.

A British jet-propelled airliner recently made a successful test flight from its home station to North Africa and back. A giant American jet-propelled bomber has made a non-stop flight across the American continent. The planned flight of the Canadian Avro Jetliner, as this first jet transport built in the Western Hemisphere is called, will be one step in determining if speedy jet planes may sometime become standard craft on trans-oceanic flights.

The Avro Jetliner is powered by four jet turbine engines and is designed to carry 50 passengers at 430 miles per hour and fly at an altitude of 30,000 feet. The plane has already made many test flights. It han-

dles easily in the air, its flight pilots declare. It does not require long take-off and landing runs, contrary to some predictions. Present runways can be used.

The Jetliner will be safer for many reasons, Avro officials believe. It uses a less volatile fuel than the gasoline used in conventional aircraft engines, with consequently less danger of fire. It will be very comfortable because it will fly high above ordinary weather conditions. Less noise and the absence of vibration will add to comfort. Speed, however, is its primary advantage.

The United States has a number of jet-propelled bombers that are as large as transports. The American airplane industry has the fundamental knowledge necessary to design and construct jet-propelled airliners. Designs satisfactory for bombers probably can not be used. Special designs will be required. Several are on the drafting boards, it is reported.

Actual construction of an American jet-

MEDICINE

False Heart Disease By Hypnotic Suggestion

➤ BEING hypnotized can make the heart beat faster. In some persons suggestions of anger and anxiety under hypnosis can cause heart signs like those in true heart disease.

This was found in experiments with five students at the University of California Medical School. The students had no real heart disease. Neither were they neurotic or anxiety ridden, conditions which sometimes cause symptoms like those of heart disease.

The studies were made by Dr. Leslie L. Bennett of the medical school in San Francisco, Calif., and Dr. Norman E. Scott of the University of Texas at Galveston. The physicians state that the results show some of the difficulties in diagnosing true heart disease and the importance of considering the patient as a whole.

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