

MEDICINE

# Jaundice Research May Give Clue to Arthritis Control

## Disease Does Not Cure But Provides "Vacation" From the Pains of Muscular Type of Rheumatism

DISCOVERY that jaundice temporarily checks the progress of chronic deforming arthritis, suggests that this most crippling and disabling of all forms of chronic rheumatism can no longer be regarded as a relentlessly progressive, uncontrollable disease for which no really satisfactory remedy need be expected, Dr. Philip S. Hench, of the Mayo Clinic, Rochester, Minn., told members of the American Association for the Study and Control of Rheumatic Diseases meeting at Atlantic City.

No new method of treating arthritis is ready for application at present. Dr. Hench made this point very clear. The work is still in the experimental stage and many complex problems must be solved before the stage of treating patients is reached. Dr. Hench reported investigations on these problems which he has been carrying on since 1929.

"The time will come, perhaps in no distant future," Dr. Hench said, "when physicians will probably be able promptly and completely to eradicate the painful symptoms of this disease as well as those of chronic muscular rheumatism. When this time comes physicians will probably be able to control the progress of deforming arthritis much as diabetes is now controlled."

### Relief

At the present time physicians can give considerable relief to sufferers with chronic arthritis and chronic muscular rheumatism by the use of various measures, the removal of infections, different types of vaccines and medicines, sometimes the use of special diets and particularly by the prolonged use of certain physical agents, such as heat and massage. Unfortunately for the present-day victims of rheumatism these measures, though generally successful in time, are often slow in producing their effects. Hence patients continue to hunt for a more dramatic relief, a "quick cure."

Scattered throughout this country there are at least 44 persons who had chronic rheumatism, sometimes severely, and who suddenly lost their symptoms almost overnight, Dr. Hench reported.

In behalf of those patients nature had pulled out of her sleeve a "new" and a "trick method" of helping them, and that method was—of all things—jaundice. Every one of these 44 rheumatic patients had developed a jaundice for various reasons, and when the jaundice became fairly intense suddenly their rheumatic pains, stiffness or swelling began to leave. Each of these patients immediately got a "vacation from rheumatism" which lasted anywhere from 3 weeks to 3 years. Then their symptoms came back, sometimes as bad as before, but often in a much milder form.

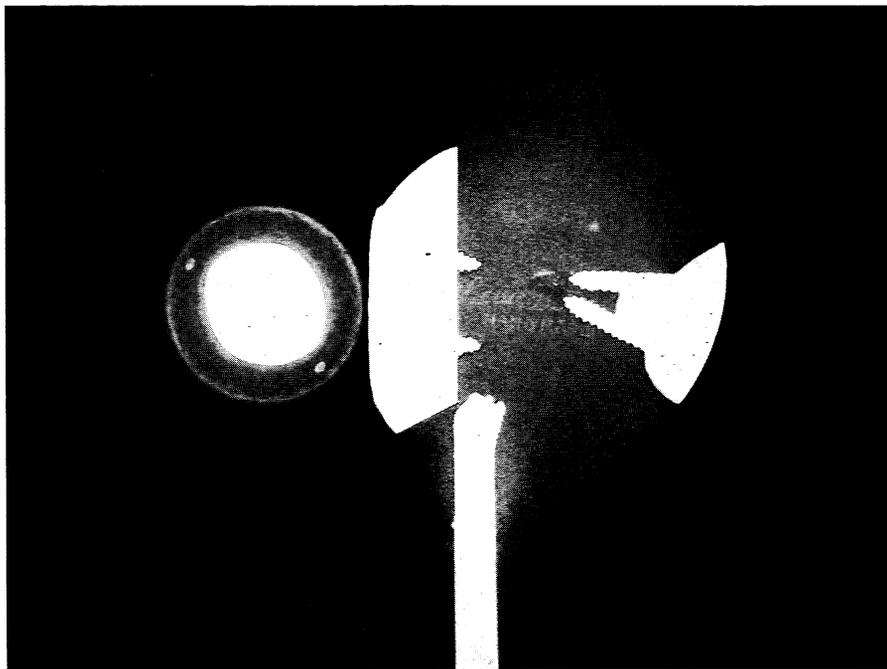
### Nature's Secret

Hearing the story of these forty-four patients, and examining their joints and muscles during and after the jaundice, Dr. Hench became certain that nature was demonstrating a special brand of

rheumatism-control, not her usual rather lazy way of stopping the disease after weeks or months of discomfort. The remissions which jaundice precipitated came on quite rapidly, usually within the first three days after the jaundice became definitely visible. As one person expressed it, "When the jaundice came in the front door, the rheumatism went out the back door." Among those who have experienced this phenomenon all the patients with muscular rheumatism and two-thirds of those with chronic deforming—or as physicians call it, chronic infectious, atrophic—arthritis were completely, if temporarily relieved of their symptoms. One-third of the arthritic patients were notably but not completely relieved.

### No One Type

Apparently no one type of jaundice is responsible for this effect, according to Dr. Hench. The phenomenon has resulted from jaundice due to a variety of causes but a "touch of jaundice" will not produce the beneficial effect, and a fairly intense jaundice is required. The remissions in symptoms, or "vacations from rheumatism" sometimes lasted like ordinary vacations—just a few days to three weeks, and then the rheumatism went back to work again on its victim.



### WHAT'S INSIDE

Here's what golfers would see as they tee-off if they had X-ray eyes. The golf ball's core, the end of the steel shaft, the sole plate, weight and the screws that hold them together are all shown in this X-ray photograph made by Miss Francis M. Davis of Santa Monica, California

Often, however, the remissions lasted two or three, even four months and a few very lucky patients were free of their symptoms for two to three years. It is no wonder then that many of these patients were "glad of the trade" as one expressed it, preferring a spell of jaundice to their rheumatism. Although there was no set rule and many variations apparent, roughly the remissions in rheumatic symptoms lasted about twice as long as the jaundice.

Jaundice does not, however, relieve all types of pain nor does it relieve the pain of all types of joint and muscle diseases. Several patients with neuritis, with gouty rheumatism, or with rheumatism of other types were observed to have just as much pain when they developed a coincidental jaundice as they had prior to the jaundice. The phenomenon seems therefore to be somewhat specific for chronic deforming arthritis and for muscular rheumatism.

Because the rheumatic symptoms usually recurred, Dr. Hench warned that jaundice must be looked upon as providing not a "cure" but a temporary control of the disease. But the fact that nature actually does possess a method for a rapid satisfactory control affords most encouraging and important news. Nature's formula is so far her secret. Probably some chemical reaction that takes place during jaundice provides nature's accidental antidote for rheumatism. Several physicians are now trying to discover what the effective agent is and how it acts.

#### To Isolate Agent

Investigations are being carried out by Dr. Hench and his associates to isolate the agent so it may some day be available in the treatment of these maladies. At the meeting Dr. Hench reported his own investigations on the use of various constituents of bile, the use of transfusions of highly jaundiced blood, and the production of artificial jaundice. It is possible that the bilirubin, or coloring pigments of bile, or that the bile salts are responsible for the phenomenon. However, certain data suggested that not these, but other substances were responsible, at least in part. Although he has not yet been able to reproduce the phenomenon at will, Dr. Hench suggested that sometime in the near future the victims of chronic rheumatism may be more anxious to develop a "bilious look" than a fashionable coat of tan. He concluded:

"The development of a safe method of producing a harmless jaundice is

needed for the further solution of the problem, but when it is obtained it should be regarded not as an end in itself but as a means to an end. Even when 'artificial jaundice' is successfully accomplished it should at best be considered a crude and temporary form of 'treatment,' but it will take us one more step—an important step—on the way to the more refined treatment of the future."

Discussing the same problem, Dr. Harry E. Thompson of Tucson, Arizona, reported that he had noted the

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## Whiskey Deadly Poison to Those Who Take Strychnine

**W**ARNING that persons who are taking strychnine as a medicine must not drink whiskey or other alcoholic liquor was given by Dr. Jack C. Norris, of Atlanta, Ga., at the meeting of the American Society of Clinical Pathologists in Philadelphia.

Strychnine and corn whiskey taken together are deadly poison even in relatively small quantities, Dr. Norris said. Both are depressing and both act on the same vital organs, affecting particularly the heart and breathing.

Whiskey deaths should be investigated to see whether the victim had swallowed strychnine also, Dr. Norris warned, because these two drugs have been used as poisons to commit murder.

"On one occasion the murderer admittedly gave his victim strychnine in whiskey as a friendly gesture, encouraging the victim all the while to take larger drinks of whiskey as a gesture of friendliness, and later followed his drunken victim down various streets watching him until convulsions and death occurred," the physician reported.

These two drugs have also resulted in accidental death.

"A middle-aged man of good repute and fair health who had been a strychnine taker for a long period was found dead. It was shown that he had drunk corn liquor to the extent of about one half a pint shortly before death. There was also indication that he had simultaneously partaken of several strychnine tablets."

In experiments with animals, Dr. Norris found that every one given these two drugs, regardless of which one was ad-

ministered first, died in the next half hour to hour.

Here are some of Dr. Norris' conclusions:

1. Experimental evidence shows alcohol and strychnine both to be dangerous poisons acting somewhat alike on the brain and spinal cord, producing death by respiratory and cardiac failure.
2. Corn whiskey and strychnine in combination are lethal poisons.
3. Strychnine should be given with reducing dosages and rest periods, for continuance leads to accumulation with possible poisoning.
4. Persons who take strychnine should not take whiskey and whiskey drinkers should not take strychnine.

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#### PHYSIOLOGY

## Substance in Sheep Brains Prevents Blood Clotting

**A** SUBSTANCE which keeps blood from clotting has been obtained from the brain of sheep and pigs by a method reported by Dr. Erwin Chargaff, College of Physicians and Surgeons, Columbia University. (*Science*, June 4).

The new substance probably does not owe its action to the presence of heparin, liver substance which also keeps blood from clotting.

Dr. Chargaff's discovery may shed important light on the whole vexed problem of blood coagulation as well as leading possibly to a means of preventing dangerous and even fatal clots within veins and arteries.

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