

MEDICINE—PSYCHOLOGY

# Mental Aid for Injured

**Athletic games and pleasant environment urged as remedy for too long prolonged convalescence from industrial injuries.**

► **ATHLETIC GAMES**, exercise and entertainment as a method of treating injured workers who for psychological reasons stay on the sick list long after their injuries are healed was proposed by Dr. Alfred P. Solomon, of the University of Illinois College of Medicine.

Many of these patients are angry and feel they have been "pushed around." They may have developed an undue dependence on or zealous possessiveness of a no longer needed crutch, brace or cane. Their long period of relative inactivity and tension has usually left them weak, flabby, with bad hygienic habits and poor morale. Their philosophy of life was directed toward establishing a prolonged disability, instead of toward growth, health and achievement.

Sometimes such patients can be rehabilitated by psychiatric treatment alone, but Dr. Solomon finds that they cooperate in a treatment which offers them "diversion, recreation and play, good body development and amiable companionship."

He gets best results by sending the patients away from home to an institution like a Y.M.C.A. with a well-equipped gymnasium. The patient is given an athletic companion who is skilled in sports, resourceful, tolerant, sympathetic to the patient's resistive behavior and interested in the results of the treatment. With this companion the patient learns athletic skills, plays games, goes on sight-seeing excursions, long walks in the park and to places of interest and amusement. The emphasis

at first is on play and recreation, with muscle training exercises introduced later as the patient gets over his idea that these are tests of his ability to return to work. Psychotherapeutic interviews at the physician's office are also given. The average patient will be rehabilitated with about six weeks of such treatment.

Dr. Solomon recommends that private capital or the government equip a large gymnasium with equipment and psychiatrically trained staff for treatment of patients with psychologically prolonged convalescence from industrial injuries.

*Science News Letter, January 23, 1943*

## War Injured Helped

► **SIMILAR TREATMENT** for war-injured men was suggested in a report by Dr. John S. Coulter, Chairman of the A.M.A. Council on Physical Therapy. He told of British experience with an air gunner who was disabled and in the hospital for ten months because of a torn and displaced cartilage in the knee. In spite of correct diagnosis, skillful operation, good wound healing without infection, arthritis or other complication, the patient had only half normal movement of the joint, walked slowly and limpingly, was depressed and resentful and ten months after the injury his incapacity was more complete than on the day of his admission to the hospital.

He was transferred to one of the orthopedic rehabilitation centers of the R.A.F. Medical Service where he saw the sky, sea and open spaces instead of the stone walls of hospital wards, corridors and massage rooms. A lounge and writing room, tasteful decorations, flowers, a varied menu, evening concerts and lectures or billiards and other games brought a smile to his face and a sparkle to his eyes within a few days. He learned to walk and run and became a gymnasium enthusiast. Within seven weeks he returned to his unit and full duty, the "nerve in his knee" forgotten.

This is no exceptional case, Dr. Coulter declared. Industrial injury records show hundreds of men who undergo the same

experience of protracted disability and deterioration of morale in spite of good treatment for their injured bodies. The remedy for the situation, the secret of success in rehabilitating war or industrially injured is to treat them, from the moment of their entrance into the hospital, as persons who are perfectly well except for "one cracked-up part."

This treatment must start at the bedside with occupational or work treatment as well as physical therapy, massage and the like. In this connection Dr. Coulter criticized the present Army set-up which, he stated, leaves "the physical therapy of the injured soldier in charge of a female physical therapy aide."

"Apparently, however, there is nothing in the set-up for a qualified medical officer to be in charge of rehabilitation," Dr. Coulter stated.

A recent law, he pointed out, gives physical therapy aides in the army the same rank as nurses but omits occupational therapy aides.

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NUTRITION

## Post-War Feeding Should Be Based on Scientific Advice

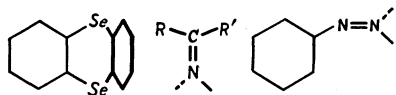
► **GOVERNMENT** agencies should get scientific advice as early as possible on their plans for post-war feeding of the starving peoples in war-torn lands, Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*, declared at the A.M.A. sponsored Congress on Industrial Health.

"Indiscriminate distribution of great quantities of food is wasteful," he stated, "and will not so surely solve the needs of the peoples concerned as will a scientific study of the primary deficiencies that exist and the diseases and degeneration that resulted from such deficiencies and the supplying of proper amounts of those foods and special ingredients of foods that have been the most deficient and are therefore the most necessary."

Even with rationing, the food supply in the United States, he declared, is sufficient for each of us to get sufficient amounts of vitamins A and C from our diet if we choose and use foods wisely, without recourse to vitamin pills. He criticized the indiscriminate use of vitamin preparations and pointed out that careless shopping and food preparation and cooking lead to much waste of vitamins in foods.

We fortify our foods with riboflavin (one of the B complex vitamins) for

### ESSAYS ON THE NEW VORTEX ATOM



There are many molecules which are not symmetrical as they should be under the Rutherford-Bohr theory of atomic structure, but which always exist in folded or distorted forms exactly as the vortex theory requires. When theories and facts conflict, then it becomes the duty of scientists to change the theories and not conceal the facts.

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example, and leave the milk bottle in the sunlight for an hour so that the milk loses most of its riboflavin, he pointed out.

Old people do not eat properly in relation to their lessened output of energy, Dr. Fishbein stated in discussing the special problems of nutrition in infancy and

old age. A greater number of men and women over sixty years, he said, might be capable of standing erect, working efficiently and be free of the aches and pains formerly considered a necessary accompaniment of old age if older people ate properly.

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## METALLURGY

## Substitutes Are Better

**New alloy steels developed for airplane engines and other war equipment will stretch stores of nickel, chromium and tungsten.**

► AN ALMOST completely new set of alloy steels will soon be used for most of the working parts of aircraft engines and other war equipment. Selected from the "National Emergency" series of steels, they will stretch the nation's supply of nickel, chromium, tungsten and other strategic alloying elements, M. H. Young and H. Hanink of Wright Aeronautical Corporation, Paterson, N. J., told the meeting of the Society of Automotive Engineers in Detroit.

The new steels will prove in all respects equal, and in some cases superior, to those now used in aircraft engines, Mr. Young maintained.

Other new, widely-used substitute materials are plastics, synthetic rubber and silver. Many of the products are cheaper, better and more versatile than they were originally, the speaker declared.

High temperature and stress conditions may limit the use of plastics in engine construction but other applications are being made.

Silver is a highly satisfactory bearing material, Mr. Young said. The new bearings are no more expensive than those they replace.

Development of various types of synthetic rubbers has led to wider use of these products in engines, as blends may be selected which have a particular resistance to heat, oil and fuel.

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### Few Premature Bursts

► NOT MORE than one high-explosive shell goes off prematurely for every 1,250,000 rounds fired, Col. H. H. Zornig, Ordnance Department, Watertown, Mass., told the meeting of the Society of Automotive Engineers.

This high safety factor depends on

design and metallurgical requirements, the speaker pointed out. American shells must be free from defect, uniform and strong.

Low strength alloys may be used in mortar shells, Col. Zornig explained, because of low firing stresses in this type of weapon. But shells used in rifles larger than 40 mm. must be produced from forged billets and carefully inspected for soundness.

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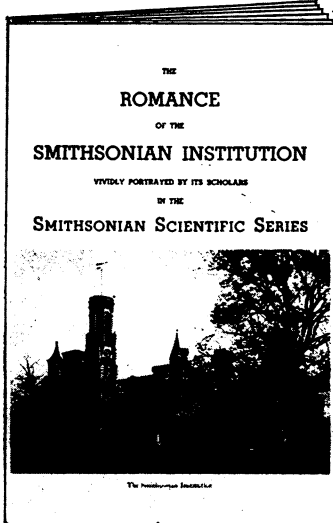
### New Bearing Alloys

► LACK OF TIN alloys need cause no worry that our motorized Army will be handicapped by bearing failures. New bearing alloys with a lead base containing arsenic and silver showed little corrosion when tested with various lubricating oils at high temperatures. L. M. Tichvinsky, senior mechanical engineer of the U. S. Naval Engineering Experiment Station at Annapolis, reported these results to the meeting of the Society of Automotive Engineers.

Further research to develop tin-substitute bearing materials should thus be practical, the speaker pointed out. Bearing alloys of high corrosion resistance are especially important during war because engines must perform overtime at high speed and increased pressure, under adverse conditions.

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The cannon-carrying *tank destroyer*, brand-new vehicle of World War II, owes most of its mobility and speed to an endless-band type of track in which steel cables and cross-pieces are imbedded in rubber to form a one-piece belt.



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