



FIRST AMERICAN CASUALTY—This radioed Signal Corps photograph shows a paratrooper suffering from a head wound who has been speeded by airplane to England for treatment.

moves supplies forward. The evacuation hospitals are usually from 14 to 300 miles back of the lines, but their location depends somewhat on the military situation. At Salerno some evacuation hospitals were set up right on the beach within a few hours after the troops had landed.

Real Hospital Care

The evacuation hospital is the first place where the wounded get what is called "definitive" treatment, meaning more than life-saving first aid and emergency surgical care. Here they get their first real hospital care, including medicine, surgery, nursing and even special diets. In these hospitals some of the wounded may make a complete recovery and return to the front.

Air evacuation, however, has been developed to such an extent in the war that few of the wounded in the European invasion are likely to remain long in evacuation hospitals. They will be flown to base hospitals overseas or to general hospitals here at home. More than 176,000 sick and wounded patients of United States and Allied forces were evacuated by American military aircraft during 1943.

Beds in the evacuation hospitals are thus quickly emptied to make room for the next contingent of wounded.

The base hospitals overseas are regular general hospitals, equipped and staffed to give complete care for every kind of

injury or illness. Men likely to recover fairly soon, a man with a broken leg or arm, for example, are kept at these hospitals until they are well. Those whose injuries may take months to heal, however, or who will have to undergo a long period of convalescence and retraining in the use of arms, legs or fingers, or who are destined to be discharged from the Army for medical reasons are evacuated as soon as possible to general hospitals at home.

The Navy's medical setup on land for treatment of marines wounded during

PSYCHIATRY

Mental Combat Casualties

If the soldiers wounded in mind in severe combat get treatment of the right sort near the front, eight out of ten of them get back in the fight.

By **MARJORIE VAN de WATER**

► **BATTLE CASUALTIES** are not all wounds of the flesh. One, two, or in some engagements three men out of every ten injured in battle have mental or emotional wounds. They are the victims, not of shot and shell, but of extreme fatigue, exposure, hunger, isolation, confusion, prolonged and acute danger of death or mutilation and,

invasion is similar to the Army's. Hospital corpsmen, like the Army's medical aid men, go right into the fight with the marines, but are armed only with their first aid kits. They are equipped and trained to do minor surgery, care for fractures, stop hemorrhage and treat shock. They carry syrettes of morphine for easing pain and sulfa drugs for fighting infection.

Following first aid by the hospital corpsman, a wounded fighter is carried to a nearby field hospital. These are portable units set up under canvas almost on the firing lines. Here the first-aid treatment is supplemented, and, if necessary, the patient is prepared for quick transportation to the nearest advanced base hospital.

The advanced base hospital is the Navy's medical answer to amphibious warfare. It is a specially designed unit of varying size, which can be quickly set up and easily moved as the fighting front progresses. It may house from 25 to several thousand beds. Each has its special equipment and complement of personnel according to its special needs, for the advanced base hospital is functioning from the equator to the Aleutians.

Sometimes, however, a wounded man needs immediate surgery and the elaborate care and equipment possible only at the big hospitals far from battle. For these emergency cases, the Navy operates a fleet of special ambulance planes, carrying up to 30 wounded. As soon as an advanced base is occupied, the naval construction battalions build airstrips for these planes, and the long trip to a safe-area hospital is reduced from days to hours.

Science News Letter, June 17, 1944

sometimes, the fear that they may lose their soldierly self-control and become cowards.

If these mental battle casualties are properly recognized and treated in the front lines, up to 80% can be returned to combat duty, some of them within a few hours.

But if they are not diagnosed and treated immediately, but sent back to rear areas, only (*Turn to page 394*)

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five or possibly ten men out of a hundred will be fit for further military duty.

These facts, together with instructions for sorting and treating mental battle casualties, are contained in a circular letter (No. 176) distributed to all the medical officers in the U. S. Army Medical Corps from the Office of the Surgeon General.

No Waiting

Modern medical skill and experience are insuring that men with mental wounds get the kind of treatment they need right at the front when the need is most urgent. There must be no waiting around for diagnosis. No evacuation to rear areas for treatment. With the same urgency that morphine is shot into the arm of a soldier in great physical agony, medical officers here give the mentally wounded a heavy dose of a drug that will quiet his nerves.

Morphine is not used. The shot in the arm that is the common prescription for physical pain is avoided. He is not given anything that would turn him into what the Army calls a "litter case"—a patient that must be carried because he cannot sit up or walk.

The drug used for the man who has cracked up mentally is what is known to physicians as a sedative—one that will act very quickly. It is soothing to jittery nerves. It lowers the soldier's sensitiveness to noise—the thunder of guns or blast of bombs and the cries of wounded or dying men. His other senses are just a little dulled, too, so that he is not so painfully aware of everything going on around him.

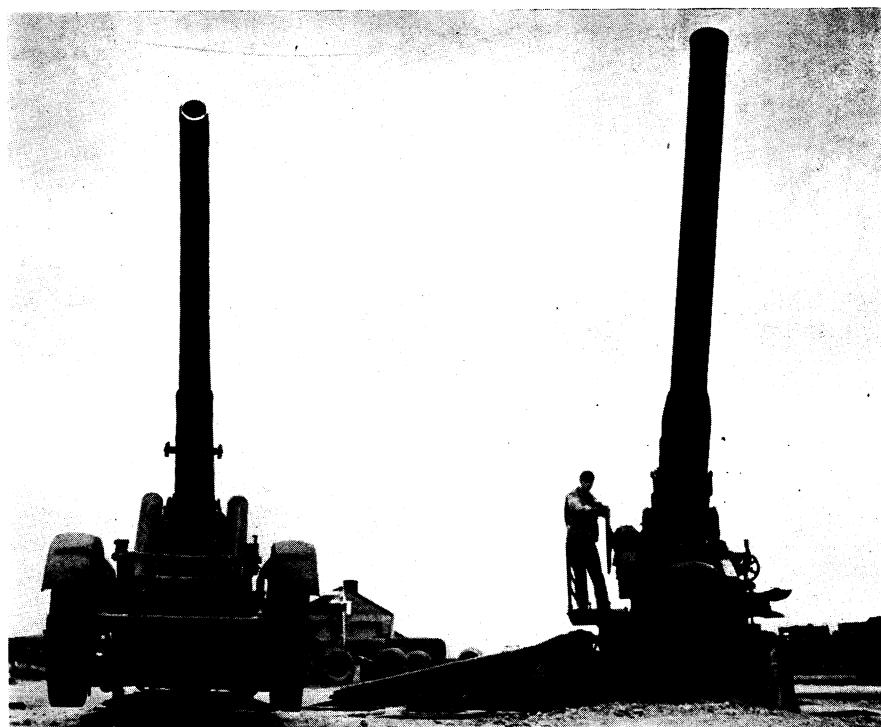
The "heavy sedation," as this dose of drug is called, is the first step in this front line treatment of the mental casualties of battle.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ WYOMING

Yes, even **THIS** summer you may fish in its mountain streams, ride horseback through its hills and canyons, find Indian relics and marine fossils in a region of great historical and geologic interest.

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MEET THE CHAMP—A while ago we heard much about a terrible weapon the Germans had put into action, the 170 millimeter gun. Now it has its answer, in the bigger and in every way more powerful American 200 millimeter (eight-inch) rifle, shown here side by side with a captured specimen of its German rival, at the Army's great proving ground at Aberdeen, Md. The American weapon's 250-pound shell weighs nearly twice as much as the 170-millimeter projectile, and its extreme range of 20 miles is two miles greater than that of the German gun. The American piece also has a much better carriage, permitting road speeds at least double the best the German gun can do, and also making handling in firing position much easier and more rapid. (See also SNL for June 10, p. 374.)

With it is also administered large doses of reassurance. It is badly needed. A soldier who has stood up under all sorts of punishment from the enemy may very well be terrified at the change that has come over himself when his nerves crack up. Especially for the man who is new in combat and has not seen other men break, it is a frightening experience. He needs to be told that it is not a permanent change. That he is not "crazy." That he is not "yellow." That he will get back his speech and his self-control when he has had rest and treatment.

Rest. That is the chief medicine. Given the time for rest and the sedative that makes rest possible, the human mind restores itself. Physicians in this war, as in all wars, are continually amazed at what men can go through. They may be knocked out of the fight temporarily. But eight out of ten men, if given rest and treatment soon enough, will come right back—with a grin and

plenty of fighting spirit in them, too.

So for some of the soldiers given this emergency front-line treatment it is all that is needed. They can go right back into the fight. It is better for them if they do. To go back of the lines would only make their condition worse.

Others will require more. They will be sent back without delay to the evacuation hospital for further treatment.

Evacuation hospitals may be anywhere from 14 to 300 miles back of the front lines, but they may be, as at Salerno, right on the beach where troops are landing and where the fighting is not more than a few hours past.

At the hospital the soldier who is a psychiatric casualty gets immediate attention. First comes a rapid examination to find out how serious his battle sickness is, and a medical diagnosis is made.

Sleep is the major part of the treatment for the mental battle casualty in the evacuation hospital. He is given frequent and heavy doses of a soothing

sedative drug to quiet his nerves. Exhaustion and the relaxing effect of the drug make it possible for him to spend most of his time sleeping for two or three days and nights.

In order that he won't think of himself as physically ill, he gets up for all meals and stands in line, cafeteria fashion, with the rest of the "up" patients. He is also responsible for keeping the part of the ward around his own bed tidy; this is to keep reminding him that he is a soldier and expected to perform the duties of one so far as his condition at the moment permits.

Aside from sleep, food, warmth and the soothing sedative, the treatment for mental battle casualties is mental treatment. He is reassured again and again—told that he is sick, but the sickness is only temporary. He will get well. Each man is given careful, patient explanation of just why and how he is ill. This instruction has two purposes. First, the man who understands what is the matter with him can help himself to get well, and recovery from mental injuries depends a great deal on the patient's own efforts. But, in addition, the frank but sympathetic talk makes the soldier realize that the physician is interested in him. He gets no brush off here, no feeling that people have no time to bother with him. This is of extreme importance in fitting the soldier to return to combat.

Needs His Friends

It would take a superman to face enemy fire feeling that he is alone. Hardest experience to bear in combat is the feeling of being the only one man left alive in a trench, a foxhole, or a particular area. Alone against the enemy. Alone with not even a flimsy shelter against assailing death. A man who has had this desolating experience gets a defenseless, helpless feeling. Before he can summon spiritual strength to go back into battle, he must regain the feeling that he is one of a group, that he is not alone, that his own stand with him ready to help him.

Exhaustion is so universally one of the causes of mental battle casualty, that front-line medical officers and Corps men are instructed to mark the emergency tag tied on these cases just "exhaustion."

Only those who do not snap out of it under treatment in the forward areas and who are sent back to evacuation hospitals are given a psychiatric diagnosis. It is found that five different kinds

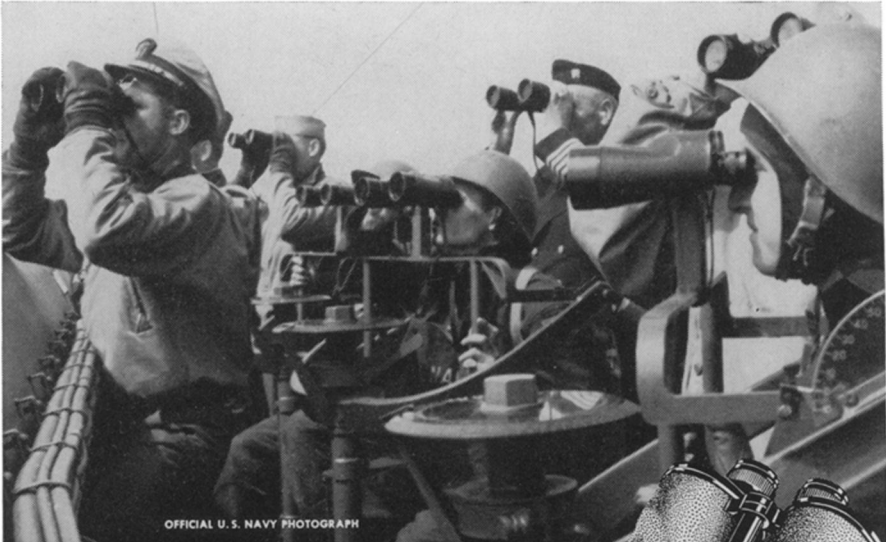
of mental illnesses can develop under the stress of battle.

By far the most common of all the mental battle wounds is known to medical officers as psychoneurosis of the anxiety type. It is what you hear your neighbors call a "nervous breakdown." Jittery, on edge, over-sensitive to noise and sudden movements, unable to sleep or when he does sleep tortured by horrible nightmares of battle, a soldier thus wounded in spirit may suffer more than does the man with a shell fragment in his leg or with a fractured jaw. They

are unable to forget the bloody, sickening scenes they have witnessed.

Another type of neurosis, called hysteria, causes the soldier to lose the use of one of his senses or some body part. He may be suddenly struck blind or deaf or unable to speak. He may have a paralyzed leg or arm. Nothing is organically wrong with these injured men; the wound is mental or emotional. But they are as truly disabled as though they had lost a part of themselves instead of losing the use of the part.

Hysteria was a (*Turn to next page*)



OFFICIAL U. S. NAVY PHOTOGRAPH

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Do You Know?

In Brazil raw *silk* production has reached 500,000 pounds a year.

Korea's real source of strength lies in her *water power* resources.

The average load of *freight* per train in 1943 was 1,116 tons, the highest on record.

Accident frequency rate of women automobile drivers exceeds that for men, but accident severity is lighter among women.

The giant *sequoias* of the High Sierra do not ordinarily produce many seeds until they are several hundred years old.

Air pressure eight miles above the earth is but two pounds per square inch while at sea level it is 14.7 pounds per square inch.

The European *corn borer* caused a loss of over \$33,000,000 to the 1943 corn crop in northeastern United States alone.

Only the United States and the Soviet Union have more *coniferous trees*—pine, spruce, hemlock, balsam—than has Canada.

Despite a record slaughter of *meat animals* in 1943, the number of livestock on farms increased again during that year.

Scarcity of fishermen in Chesapeake Bay is permitting about twice as many *shad* as usual to escape fishermen's nets to spawn in the rivers and upper sections of the Bay.

Although milk and cheese, top providers of essential *calcium*, may be scarce, adequate quantities of this mineral may be derived from loose-leaved varieties of green cabbage and green lettuce, mustard and turnip greens, broccoli and kale.

The average production of the 26,000,000 American dairy cows is about 4,700 pounds of *milk* per cow a year; that of 800,000 cows under the Dairy Herd Improvement Association, 8,000 pounds; the world's record for one cow is 41,943 pounds.

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common battle casualty in the First World War. In this war, surprisingly, it is notable for its rarity.

Normal men very seldom if ever develop a true mental disease—a psychosis—during combat. But unstable persons, susceptible to mental illness, may have the illness brought on by the stress of battle. It happens. But it does not happen often. Men reaching combat are, in general, very sound, strong individuals. They are not likely to be victims of the mental diseases such as schizophrenia or manic-depressive psychosis which are the most common illnesses seen in mental hospitals.

Two other types of mental defect are not so much brought on, as brought to light, by combat. These are mental deficiency—subnormal intelligence—and the kind of personality defect known to medical men as psychopathic personality. The psychopathic personality is the kind of person who, in civilian life, is the typical four-flusher, the check-passer, the bluffer and sponger, the man who is simply constitutionally unable to be four-square. This sort of person cannot stand combat; his bluff is called there.

The fifth type of mental battle casualty is blast concussion. When a bomb bursts near a man, the force of the ex-

plosion may do severe damage to the tissues of his body. He may bleed inwardly, and may have hemorrhage of the brain. The mental effect is just about the same as though he were hit a terrific blow over the head. He is knocked out. He may be unconscious or dazed for a long time afterward.

Such blast concussion cases, all the psychoses and organic mental disease cases along with all severe cases of mental deficiency and psychopathic personality are immediately evacuated from the front-line area.

All but the most severe of the anxiety type psychoneurosis cases are kept and restored, if possible, without delay to active duty.

I have asked military physicians whether these men with mental battle injuries might be mistaken for malingerers—whether it is ever hard to be sure they are not “putting on” because they find combat too tough for them. The answer is no. No one who has seen these men coming from the front lines could fail to realize their suffering is real. The soldiers they fight with recognize their illness as genuine, and many a man has left his foxhole at grave risk of his own life to bring in a mentally wounded man who has become unable to seek cover without aid.

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GENERAL SCIENCE

Post-War Organization

Thorough cooperation between the sciences and professions of all nations urged as one of first considerations after victory.

Need for thorough cooperation between the sciences and professions of all nations after the war was voiced by Morris S. Rosenthal, vice-president of the National Council of Importers and former assistant director of the Board of Economic Warfare, at the National War-time Conference in New York.

“There must be a basic international organization to deal with the broad political and economic problems essential to the maintenance of world peace. . . . Subsidiary to this parent international organization, organizations should be established to formulate collaborative programs in the fields of science,” Mr. Rosenthal declared.

An international educational program with a permanent working staff should be created, the speaker advocated. The

major function of this program would be to educate all countries of the world about the people of other countries. A secondary function would be to set up international exchanges of students and teachers, and arrange for high school and college students to take vacation trips in countries other than their own, accompanied by their teachers.

Mr. Rosenthal also proposed an international medical society for the rapid dissemination of information about new medical discoveries so that they may become quickly available to doctors in all parts of the world. This organization would also assist nations with poor medical organizations in building up their facilities for taking care of the sick.

In the field of patents, Mr. Rosenthal suggested an international patent organi-